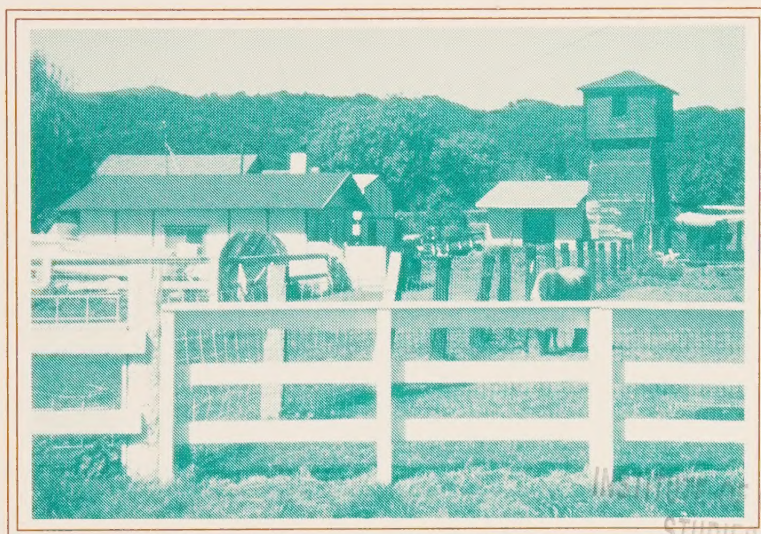


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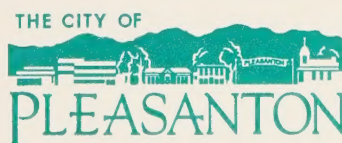
for

Happy Valley Specific Plan


and

Related Planning and Development Actions

State Clearinghouse No. 97032034
City of Pleasanton Project No. GPA 97-01, SP 97-01, RZ 97-01



Prepared by Mundie & Associates and City of Pleasanton
February 1998



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CHAPTER 1

SUMMARY

A. INTRODUCTION

This environmental impact report (EIR) addresses a series of actions affecting a study area of about 860 acres in south Pleasanton. Major proposed actions include several amendments to the Pleasanton General Plan; adoption of the Happy Valley Specific Plan; Planned Unit Development (PUD) pre-zoning; annexation to the City of Pleasanton of lands in roughly 110 ownerships; and development of a Golf Course and several residential projects. Other proposed actions include road improvements and infrastructure extensions in support of the Golf Course and residential development in the proposed projects and on infill sites.

The EIR has been prepared in accordance with the California Environmental Quality Act of 1970, as amended, and state guidelines for the implementation of CEQA.

B. BRIEF DESCRIPTION OF THE PROJECT

1. Location

The Happy Valley Specific Plan Area is located in unincorporated Alameda County, immediately south of the existing Pleasanton city limits and east of Interstate 680. Figure 1 (facing p. 1) shows the EIR study area and its regional context. The site occupies approximately 860 acres of land in the area known as Happy Valley. It is bordered by Sycamore Road and the incorporated North Sycamore Specific Plan Area on the north, open hills on the east and south, and existing residential neighborhoods and I-680 on the west.

2. Proposed Land Use Program

Land uses that would be permitted in the Happy Valley Specific Plan Area include (1) housing, at densities that are generally consistent with the semi-rural character of the area, and (2) a municipal Golf Course with a practice facility and clubhouse. These uses are briefly described in Table 1. Locations identified in Table 1 are mapped in Figure 2 (p. 4).

Table 1
Summary of Proposed Land Uses

Proposed Land Use	Location	Potential Development
Medium Density Residential (MDR)	Spotorno Upper Valley	Up to 75 housing units
Low Density Residential (LDR)	Spotorno Upper Valley	Up to 5 housing units ^a
	Golf Course	Up to 34 housing units ^b
Semi-rural Density Residential (SRDR)	Greater Happy Valley	Up to 65 housing units ^c
Municipal Golf Course (GC)	Golf Course	18 holes, practice facility, clubhouse ^d
Open Space (OS)	South and east hills	

^a In addition, one existing home would be retained.

^b In addition, one existing home would be retained and one would be relocated to this area from the Golf Course (this relocation is also indicated in footnote d).

^c In addition to existing units.

^d One existing home would be retained and one would be relocated to the Golf Course LDR area (as indicated in footnote b).

Source: City of Pleasanton and Mundie & Associates

In general:

- Residential development would be permitted in the Greater Happy Valley area, along the Golf Course, and in two locations in the Spotorno Upper Valley. Densities would range from semi-rural density (maximum of one home per two acres) in the Greater Happy Valley area to medium density (maximum of five homes per acre) in one portion of the Spotorno Upper Valley.
- The Golf Course would occupy the southeastern portion of Happy Valley.
- Open space would occupy most of the hills to the south and east of the valley.

3. Other Actions Covered by This EIR

In addition to the land use program described above, this EIR covers the following actions:

- **Planning Actions**

- Several amendments to the Pleasanton General Plan.
- Adoption of a Specific Plan for the Happy Valley area.
- Rezoning of the Plan Area to a series of PUD districts, permitting the uses summarized in Table 1.
- Annexation of the Plan Area to the City of Pleasanton.
- Securing of permanent open space primarily in the hills that form the eastern, southern, and southwestern boundaries of the site.

- **Land Use and Development Actions**

- Development of an 18-hole golf course, practice facility, and clubhouse.
- Development of up to 34 Low Density housing units in the Golf Course area.
- Development of up to 22 housing units at Semi-Rural Density (one unit per one and one-half acres) on the Spotorno Flat Area, which is located on the outside loop of the Greater Happy Valley Area.
- Development of up to five Low Density housing units in the Spotorno Upper Valley area.
- Development of up to 75 Medium Density housing units at in the Spotorno Upper Valley Area.

- **Provision of Circulation Facilities**

- Construction of a Bypass Road to extend from the eastern terminus of the East/West Collector (in the North Sycamore Specific Plan Area) through the Spotorno Upper Valley residential areas and then to the Golf Course, terminating at the Golf Course.
- Trails that implement the trail concepts illustrated on the Pleasanton General Plan map.
- Emergency Vehicle Access (EVA) routes (1) to/from the Golf Course along an extension of Happy Valley Road east of Alisal Street, (2) from the south end of Laura Lane

south to Happy Valley Road (future), (3) between Mockingbird Lane and East Mockingbird Lane; and (4) between the Spotorno Flat Area and Alisal Street.

- Minor improvements to Happy Valley Road and Alisal Street.
- Potential construction period access to the Golf Course.

- **Provision of Infrastructure**

- Extension of the City of Pleasanton's water supply system to serve Happy Valley.
- Extension of the City's sanitary sewer system to serve Happy Valley.
- Storm drainage improvements that will reduce the volume of storm water runoff that drains into Happy Valley Creek during peak-flow periods.

4. Potential Future Actions Not Covered by This EIR

The potential site-specific impacts (drainage, geology and soils, public health and safety, biology, and cultural resources) of development of individual homes on individual lots in the Greater Happy Valley Area (Subarea d, as shown in Figure 2, p. 4) are not covered by this EIR except for homes that would be located in the Spotorno Flat Area. Construction of these homes would be subject to existing City, County, State, and Federal regulations that address the disturbance of special-status species habitats, jurisdictional wetlands, and waters of the U.S.; the identification and disposal of hazardous materials; the need for design and construction techniques that minimize potential risk from geologic hazards; the potential for increased storm water runoff; the possible discovery of previously-unidentified cultural resources; and other potential impacts.

C. PROJECT IMPACTS AND RECOMMENDED MITIGATION MEASURES

The Specific Plan was formulated in an iterative process with the preparation of the EIR, so that most potential impacts that were identified during the environmental evaluation process could be "pre-mitigated" by the inclusion of appropriate requirements in the Specific Plan.

As a result of this process, remaining project-level impacts of the actions covered by this EIR are limited to:

- **Land Use:** Conversion of land from agricultural to urban use. Land now in agriculture would be converted to residential and golf course use. This impact is both a project-level and a cumulative impact.
- **Biology:** Disturbance of wetlands and waters of the U.S. exceeding one-third acre of wetlands and 200 linear feet of channels.
- **Seismic Safety:** Introduction of structures and population into an area in which the likelihood of impacts from seismic events is high.

Neither land use nor seismic safety impacts can be mitigated to a less-than-significant level if development permitted by the Specific Plan occurs.

To mitigate potential impacts on biological resources, the Specific Plan recommends that the reconstruction of the drainage system within the golf course incorporate design features that would reduce erosive conditions along drainage ways; result in variation in the speed and depth of seasonal flow in those drainage ways; and vegetate adjacent side slopes for reduction of erosion and, possibly, improvement in habitat value. This program mitigation would partially, but not fully, mitigate the impact on wetlands and waters of the U.S. The following additional mitigation measure is required:

- **Measure J1: Provide such additional mitigation of wetland impacts as may be required by the Army Corps of Engineers upon their review of the City's application for a fill permit.** The Army Corps of Engineers may find the City's program mitigation adequate, or may require additional measures preliminary to issuing a fill permit. Implementation of any such additional measures would be required for the Golf Course grading plan to be implemented.

In addition, the EIR identifies the following potential cumulative impacts:

- **Transportation:** Traffic associated with the Specific Plan project, together with traffic generated by other future development, would contribute to cumulative traffic levels in the regional system projected to violate the standard adopted by the Tri-Valley Transportation Council.
- **Water Supply:** The water demand of the Specific Plan project, together with demand generated by other future development, would contribute to Zone 7's anticipated need to expand its available water resources in order to meet buildout water needs of its service area.
- **Wastewater Treatment Capacity:** Increase in wastewater flows generated by the project site, in conjunction with wastewater flows generated by other Pleasanton projects, would contribute to the Diablo San Ramon Service District's (DSRSD's) need to expand treatment capacity at the wastewater treatment plant (WWTP).
- **Wastewater Export Capacity:** The wastewater export demand of the Specific Plan project, together with demand generated by other future development, would contribute to an impending shortfall of Pleasanton's export capacity in the Livermore-Amador Valley Wastewater Management Authority (LAVWMA) pipeline and to LAVWMA's anticipated need to expand pipeline capacity.
- **Fire Protection:** In combination with other planned, proposed, and approved development, including buildout of development anticipated by the Pleasanton General Plan, development according to the Happy Valley Specific Plan would contribute to demands for fire protection that would eventually expose additional portions of the fire service area to risk in the form of response times exceeding five minutes.

D. RELATIVE ENVIRONMENTAL IMPACTS OF ALTERNATIVES

Five land use alternatives (Alternatives 1 through 5) and one locational alternative (Alternative 6) were defined for the EIR. These alternatives, and their relative environmental impacts, are described below.

1. No Project

The Happy Valley Specific Plan area would not be annexed to the City of Pleasanton, and would remain in agricultural, church, and large-lot residential use. There would be no golf course, no infrastructure extensions, and no new housing.

This alternative would have no environmental impacts.

2. Current Pleasanton General Plan: Golf Course and Two-acre Density Throughout the Happy Valley Loop

The Happy Valley Specific Plan area would be annexed to the City of Pleasanton. New development in the area would include an 18-hole municipal Golf Course, Low-Density Residential development (maximum of one home per two acres) in the Greater Happy Valley area, and two residential areas – a five-acre area of Low-Density Residential and a 15-acre area of Medium-Density Residential, similar to those designated in the proposed project – in the Spotorno Upper Valley areas. A total of 138 new housing units could be accommodated by this alternative. Access to the Golf Course and Golf Course Housing would be via the Happy Valley Loop; access to the Spotorno Upper Valley area would be via a connection to the east end of the East/West Collector in the North Sycamore Specific Plan Area.

Most impacts under this alternative would be similar to those of the proposed Specific Plan. Differences would be:

- **Transportation:** Traffic would be greater on the Happy Valley Loop.
- **Noise:** Traffic associated with buildout of the Specific Plan would increase noise levels by more than 3 dBA along Happy Valley Road.
- **Biology:** Fewer impacts because (1) there would be no Bypass Road between the Spotorno Upper Valley MDR residential area and the Golf Course, thus avoiding potential impacts on jurisdictional wetlands and waters of the U.S. in this area and (2) development on the Golf Course would cover a slightly smaller area than in the Specific Plan, thereby slightly reducing the potential for impacts on jurisdictional wetlands and waters of the U.S. and on heritage trees. As a result of these differences from the proposed project, this alternative would require less regulation to avoid adverse impacts than is included in the proposed Specific Plan.

3. One-Acre Density Inside Happy Valley Loop/ General Electric and Koopmann Properties

An expanded area (95 additional acres of the Happy Valley area) would be annexed to the City of Pleasanton: 25 acres on the east side of the Project Area currently owned by the General Electric Company and 70 acres on the south side of the project area currently owned by Koopmann. Development would be similar to the proposed project; the main differences are that (1) the Golf Course would be expanded into a 15-acre portion of the adjacent the General Electric Company property, (2) trails would be extended into the adjacent General Electric and Koopmann properties, and (3) the minimum residential lot size inside the Happy Valley Loop would be one acre instead of two acres. The total potential for new housing units, including those in the Spotorno Upper Valley LDR and MDR areas, is increased to 211, compared to 179 in the proposed project and 138 in Alternative 2.

Access to the Golf Course, Golf Course Housing, Spotorno Flat area, and Spotorno Upper Valley areas would be via a connection to the east end of the East/West Collector in the North Sycamore Specific Plan area (this alignment is the same as in the proposed project).

Impacts would be similar to those with the proposed project, except as follows:

- **Noise:** Traffic associated with buildout of the Specific Plan would increase noise levels by more than 3 dBA along Happy Valley Road and along the East/West Collector between the intersection of Sycamore Road and Sunol Boulevard.
- **Biology:** Expansion of the Golf Course onto 15 acres of the GE property and extension of trails onto the GE and Koopman properties would expand the area of habitat affected by the project.

4. One-Acre Density Throughout the Happy Valley Loop

The Happy Valley Specific Plan area would be annexed to the City of Pleasanton. Development would be similar to the proposed project, except that the residential density both inside and outside the Happy Valley Loop and would be one home per acre instead of one home per two acres. This modification would allow for the development of as many as 280 new homes (including those in the Spotorno Upper Valley LDR and MDR areas). Access to the Golf Course, Golf Course Housing, Spotorno Flat Area, and Spotorno Upper Valley would be via a connection to the east end of the East/West Collector in the North Sycamore Specific Plan area, as in the proposed project.

Impacts would be similar to those with the proposed project, except as follows:

- **Noise:** Traffic associated with buildout of the Specific Plan would increase noise levels by more than 3 dBA along Happy Valley Road and along the East/West Collector between the intersection of Sycamore Road and Sunol Boulevard.

5. Alameda County General Plan Concept

The Happy Valley Specific Plan area would not be annexed to the City of Pleasanton, but infrastructure (water, sewer, storm drainage, etc.) that permits new development would be installed (either privately or by the County). Development would be permitted as shown on the Alameda County General Plan Map. The County Plan allows Low Density Residential uses, at densities of one to four units per acre, throughout most of Happy Valley. The remaining outlying hilly land, including most of the Spotorno property, is designated as Large Parcel Agriculture (one housing unit per 100 acres). No golf course would be developed. This alternative would permit the construction of up to 890 new housing units. Vehicular access to the study area would be via the Happy Valley Loop.

Alternative 5 would have the following impacts in addition to those anticipated for the proposed project:

- **Land Use:** Change in the semi-rural character of Happy Valley. Because the County General Plan permits residential development throughout the Happy Valley area at densities of one to four units per acre (compared to the existing Pleasanton General Plan density of no more than one unit per two acres), development permitted by the County would transform Happy Valley from a semi-rural community to a more typical suburban residential area.

Potential for conflicts between residential use and agricultural activities. Conflicts could occur as a result of intrusions onto agricultural lands by residents and/or their pets as well as intrusions by escaped livestock into residential areas.

- **Transportation:** Traffic would exceed the City of Pleasanton standard (2,000 to 3,000 vehicles per day on residential roads) on all roadway segments in the study area. In addition, slow-moving agriculture-related traffic is often perceived as a nuisance by residents who use the same roads.
- **Noise:** Traffic associated with buildout of the Specific Plan would increase noise levels by more than 3 dBA along Happy Valley Road, Alisal Street, and Sycamore Road between Alisal Street and Sunol Boulevard.
- **Biology:** Alternative 5 would result in fewer impacts on biological and wetland resources than any other alternative considered except the No Project alternative, because (1) the Bypass Road would not be constructed; (2) the Spotorno Upper Valley MDR area would not be developed, thereby avoiding impacts in this area; (3) the footprint of the Low Density Residential development is slightly smaller than the footprint of the residential area in the proposed project and area of development in the Spotorno Flat area would also be smaller, which would reduce the potential for impacts on jurisdictional wetlands and waters of the U.S. and on heritage trees.

6. Alternate Location

CEQA requires that EIRs consider at least one alternate location for the proposed project. In this case, the Specific Plan is intended to guide land uses particularly in the Happy Valley area of Pleasanton. Therefore, an alternate location would not be possible and this alternative is not considered further.

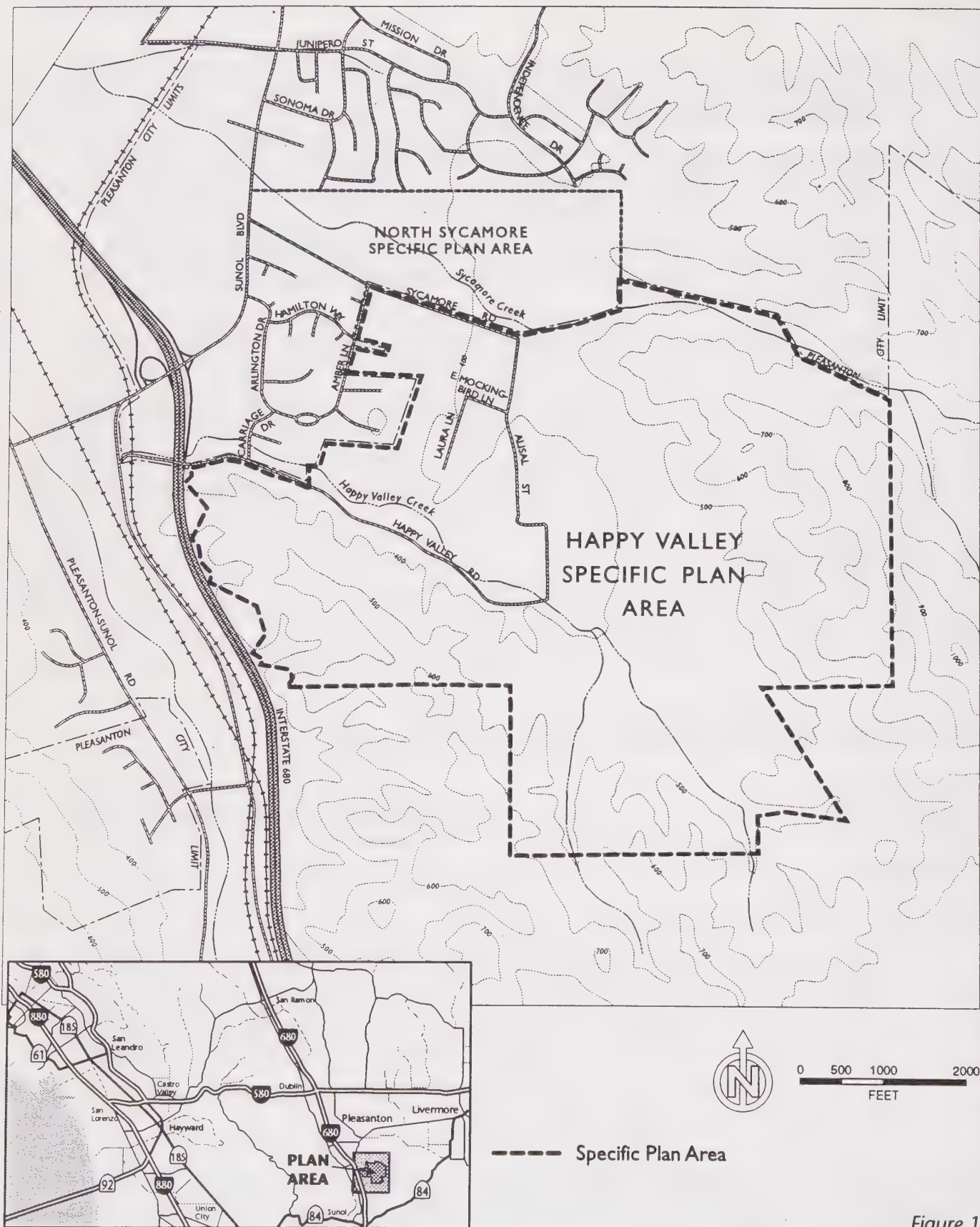
E. ENVIRONMENTALLY SUPERIOR ALTERNATIVE

The proposed project would have the fewest significant adverse impacts of any alternative except the No Project alternative. As indicated above, the adverse impacts of the Specific Plan are limited to (1) conversion of agricultural land to urban use and (2) introduction of additional population into an area subject to seismic risk.

It would also have several beneficial impacts:

- The City water supply and sewage collection systems would be extended into an area that currently relies on groundwater of poor quality for its water supply. Extension of the City water supply system would assure a supply of reliable potable water to those homes and other users who are connected to the system. The wastewater collection system would prevent additional discharge of household effluent into existing groundwater sources, thereby reducing the potential for additional groundwater contamination from this source.
- The Golf Course would provide increased recreational opportunities for City residents.

On balance, the benefits associated with improvements in groundwater quality, collection and disposal of wastewater, and provision of recreational opportunities for the City of Pleasanton outweigh the adverse land use and seismic safety impacts of the proposed project. Therefore, the proposed project is the environmentally superior alternative.



Source: City of Pleasanton

Figure 1
EIR Study Area

CHAPTER 2

PROJECT DESCRIPTION

A. INTRODUCTION

This environmental impact report (EIR) addresses a series of actions affecting a study area of about 860 acres located in south Pleasanton. Major proposed actions include several General Plan amendments; adoption of a Specific Plan; Planned Unit Development (PUD) pre-zoning; annexation to the City of Pleasanton of lands in roughly 110 ownerships; and development of a Golf Course and several residential projects. Other proposed actions include road improvements, trails, and infrastructure extensions in support of the Golf Course and residential development in the proposed projects and on infill sites.

This EIR has been prepared in accordance with the California Environmental Quality Act (CEQA) of 1970, as amended, and state and local guidelines for the implementation of CEQA. Information on the impacts of the proposed project is drawn from the Notice of Preparation included as Appendix A, public input provided at an EIR scoping meeting held on April 30, 1997, input provided by the City of Pleasanton, research undertaken by the EIR consulting team, and other sources as identified in Chapter 7.

B. PROJECT LOCATION

The Specific Plan Area is located in unincorporated Alameda County, immediately south of the existing Pleasanton city limits and east of Interstate 680. Figure 1 (at left) shows the EIR study area and its regional context. The site occupies approximately 860 acres of land in the area known as Happy Valley. It is bordered by Sycamore Road and the incorporated North Sycamore Specific Plan Area on the north, open hills on the east and south, and existing residential neighborhoods and I-680 on the west.

C. ORGANIZATION OF THIS EIR

Chapter 1, Summary provides a summary of the environmental review. It begins with a brief description of the project and then highlights the potential significant adverse environmental effects. (Because the Specific Plan addresses and “premitigates” most adverse environmental effects, the remaining impacts that are described in Chapter 1 are only those that cannot be mitigated to a less-than-significant level; therefore, the Summary does not describe recommended mitigation measures.)

Chapter 2, Project Description (this chapter) presents a description of the project and the EIR.

Chapter 3, Setting, Impacts, and Mitigation Measures examines the likely environmental impacts of the Specific Plan project.

Chapter 4, Project Alternatives describes several alternatives to the project, including the No Project alternative, and provides a review of differences in impacts that would result.

Chapter 5, Cumulative and Growth-inducing Impacts, describes the expected impacts of the proposed Specific Plan and development it would allow in Happy Valley in conjunction with other proposed and potential projects in Pleasanton.

Chapter 6, Other Environmental Considerations, recapitulates the significant adverse impacts that cannot be avoided if the project is implemented (that is, the Specific Plan is adopted and permitted development proceeds), identifies significant irreversible environmental changes that would result from the proposed project should it be implemented, lists the areas of environmental concern in which no significant adverse effects were identified, and considers the relationship between local short-term uses of the environment and the maintenance and enhancement of long-term productivity. Consideration of these topics is mandated by CEQA.

Chapter 7, Consistency with Local Planning addresses the consistency of the Specific Plan provisions other than land use with the Pleasanton General Plan.

Chapter 8, Sources, presents a list of documents, individuals, and organizations contributing information used in the preparation of this EIR.

D. PROJECT OBJECTIVES

The Happy Valley Specific Plan (Draft, 1998) presents as a goal “to provide guidance for coordinating development in the Happy Valley area, following annexation to the City of Pleasanton.” The draft Specific Plan reflects long consideration by the City of Pleasanton and residents and property owners regarding ways to annex the Happy Valley area while retaining a semi-rural lifestyle. Pleasanton previously (1992) adopted the North Sycamore Specific Plan (NSSP) for the adjoining area immediately to the north. The concept of developing a municipal Golf Course in the southern Happy Valley strengthened interest in annexing the Plan Area through a similar City/Neighborhood planning process. The background for the evolution of the Specific Plan is described in the draft Specific Plan (Chapter I, Section C).

The objectives of the project, enumerated in the Specific Plan document (Chapter IV), include:

- Perpetuation of the existing semi-rural uses and lot patterns within infill portions of Happy Valley, while clustering homes on the Spotorno Property and the in the Golf Course area, to preserve large areas of open space,
- Development of a high-quality, walkable municipal Golf Course in the Happy Valley area,
- Provision of a traffic circulation system that is safe, convenient, and uncongested, that minimizes vehicular traffic from new development on the Happy Valley Loop, and ensures adequate access for emergency vehicles,
- Extension of trails to provide public access to Happy Valley area,
- Provision of City water and sewer service to the area,
- Development of a storm drainage system that accommodates existing flooding conditions in the Specific Plan Area while substantially maintaining riparian habitats,
- Permanent preservation of open space through public land acquisition and easements, and

- Preservation of the natural environment of the Plan area, including mature trees, wetlands and riparian habitat along creeks, and wildlife corridors and valuable habitat areas.

E. SPECIFIC PLAN LAND USE PROGRAM

1. Specific Plan Subareas

Six subareas of the Happy Valley Specific Plan Area, shown in Figure 2, have been delineated according to their anticipated future uses. These subareas, identified by letters “a” through “f,” are described below.

a. Spotorno Upper Valley Medium Density Residential (MDR) Subarea

The Upper Valley portion of the Spotorno property is located behind a ridge that separates it from the balance of the Specific Plan Area. This area is drained by Sycamore Creek.

Access to the Spotorno Upper Valley area is currently provided by a private driveway that extends from the east end of Sycamore Road.

An area of approximately 15 acres of relatively flat, developable land is located in the northeast corner of the Spotorno property. This area is visually isolated by surrounding uplands with the exception of a partial view to the northwest, toward developed areas of Pleasanton. This subarea is proposed for Medium Density Residential (MDR) development of up to 75 new housing units at a density of five units per acre.

b. Spotorno Upper Valley Low Density Residential (LDR) Subarea

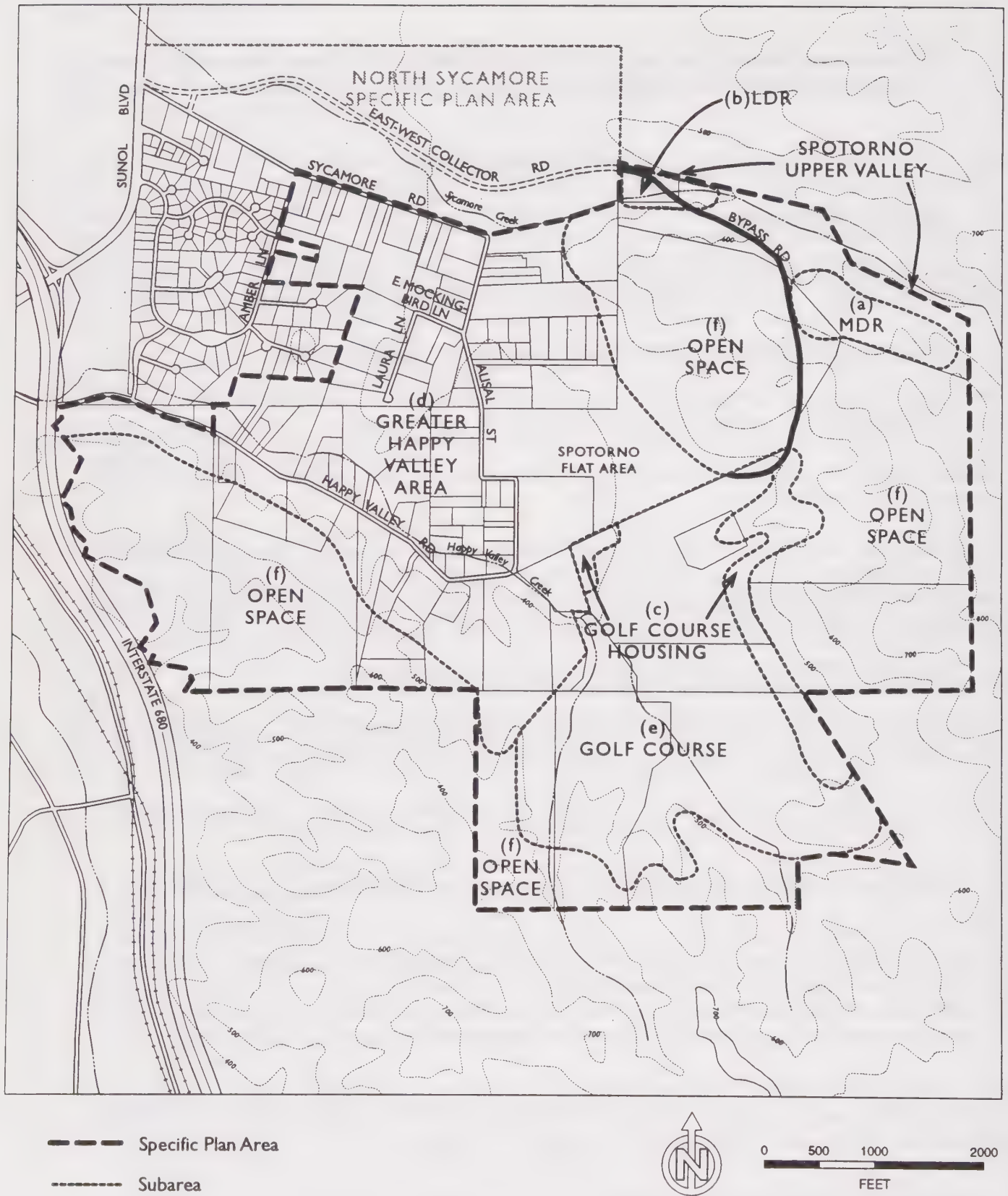
The five-acre LDR area lies immediately east of the North Sycamore Specific Plan Area along Sycamore Creek, south of the City water tank site. The Spotorno home is located in the eastern portion of the area.

This site is proposed for Low Density Residential (LDR) development of up to five new housing units at a density of one home per acre. The existing Spotorno ranch house would be retained.

c. Golf Course Low Density Residential (LDR) Subarea (“Golf Course Housing”)

The ridge that separates the Spotorno Upper Valley from the balance of the Specific Plan Area rises upward from the valley for which “Happy Valley” is named. In the southeastern portion of the Valley, a subarea of approximately 20 acres of land is planned for Low Density Residential (LDR) development to accommodate up to 34 new housing units around the Golf Course. As shown in Figure 2, this subarea is divided into two parts, one on the eastern edge of the Golf Course and one on the western edge.

One existing home is located in this area (the Manning home, Lot 102; see Figure 3 for lot locations), and would be retained under the Specific Plan. Another existing home (the Jordan home, Lot 103), currently located in the Golf Course Subarea, would be relocated to this subarea.



Source: City of Pleasanton

Figure 2
Happy Valley Subareas

d. Greater Happy Valley Semi-Rural Density Residential (SRDR) Subarea

Greater Happy Valley is the area along both sides of Happy Valley Road and Alisal Street.

The previously-developed portions of the Specific Plan Area are generally located in this area. Mostly half- to five-acre ranchettes exist inside the Happy Valley Loop (north of Happy Valley Road, west of Alisal Street and south of Sycamore Road) and one- to fifteen-acre ranchettes occupy the area outside the Loop (south of Happy Valley Road and east of Alisal Street). The area identified as “inside” the Loop includes 74 parcels encompassing approximately 122 acres and 71 existing housing units. The area identified as “outside” the Loop includes 42 parcels encompassing approximately 156 acres and 31 existing housing units, as well as a church. The 33-acre “Spotorno Flat Area” along the east side of Alisal Street is within the Greater Happy Valley Subarea, and is included in the parcel count, acreage, and housing units for the area outside the Loop.

This subarea is proposed for Semi-Rural Density Residential (SRDR) development that would accommodate up to 65 additional housing units at a density of generally one home per two acres.

e. Golf Course Subarea

This subarea consists of an extensive area of flat to moderately sloping land in the southern portion of Happy Valley. It is proposed for a municipal golf course, practice facility, and clubhouse.

Two existing homes are located on the Golf Course properties (the Jordan home, Lot 103; and the Jensen home, Lot 105). Based on the Golf Course design dated December 29, 1997, it is expected that one these units (Jensen) may remain in its current location and the other (Jordan) will be moved to one of the Golf Course Low Density Residential subareas (Subarea “c”) delineated within the vicinity of the Golf Course. The final disposition of the respective units will depend on the final Golf Course plan.

f. Open Space Subarea

The balance of the land lying outside the areas proposed for golf and residential development would remain in open space. These lands, along with 40 acres of the Golf Course, lie outside the Urban Growth Boundary (UGB) defined in Pleasanton’s 1996 General Plan (discussed in Chapter 3, Part A). Included in this subarea are approximately 131 acres of hilly land located mostly east of the Golf Course which is to be purchased by the City in conjunction with the Golf Course properties, 105 acres of the Spotorno Property, and lands in smaller parcels located south of Happy Valley Road.

2. Land Use Program Summary

The land use program for the Happy Valley Specific Plan is summarized in Table 2. Locations of the parcels identified in the table are shown in Figure 3.

Residential development potential under the Specific Plan is summarized in Table 3. This table identifies a potential for up to 179 new housing units in the Specific Plan Area. Of the added residential units, up to 80 would be in new residential projects in the Spotorno Upper Valley, up to 22 units are possible in the Spotorno Flat Area of the Outer Happy Valley Loop, and up to 34 in the LDR areas within the 18-hole Golf Course Subarea. The balance would be infill units, which would be added to approximately 116 existing parcels, the majority of which already have a housing unit.

Table 2
Specific Plan Subareas and Proposed Uses

Specific Plan Subarea	Proposed Land Use	Acres	Parcel Nos.
a. Spotorno Upper Valley	MDR – Medium Density Residential	15.00	Part: 97 and 98
b. Spotorno Upper Valley	LDR – Low Density Residential	5.00	All: 96 Part: 97
c. Golf Course Housing	LDR - Low Density Residential	20.00	Part: 101-104
d. Greater	<i>Inside Loop</i> SRDR – Semi-rural Density Residential	121.51	All: 1–74
Happy Valley	<i>Outside Loop</i> SRDR – Semi-rural Density Residential	156.00	All: 77-79, 81-87, 90-95, 99-100, 107-109, 112-114, 117, 123, 125 Part: 75-76, 80, 88-89, 98, 110-111, 115, 118-122, 124
e. Golf Course	Municipal Golf Course	165.24	All: 106 Part: 101-105, 110
f. Open Space	wholly in Open Space (OS) Subarea	5.01	All: 116
	divided between OS and Subarea a	104.77	Part: 97, 98
	divided between OS and Subarea d	140.82	Part: 75-76, 80, 88-89, 110-111, 115, 118-122, 124
	divided between OS and Subarea e	125.78	Part: 101;103-105
Total		859.13	

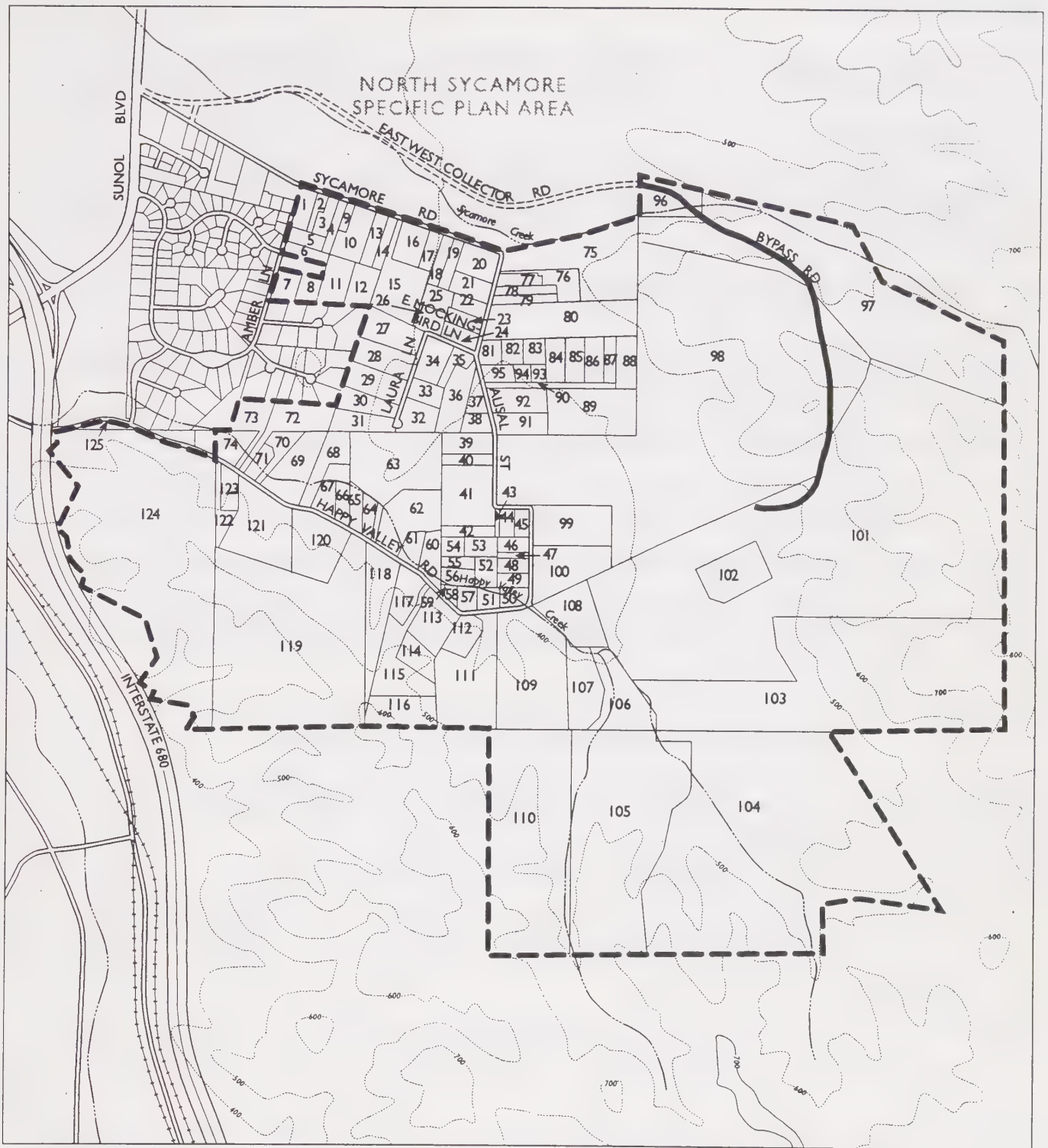
* Lot locations are shown in Figure 3.

Source: City of Pleasanton and Mundie & Associates

Table 3
Residential Development Potential under the Happy Valley Specific Plan

Subarea	Proposed Use	Housing Units	
		Existing	Potential New Units
a. Spotorno Upper Valley MDR	Medium Density Residential	0	75
b. Spotorno Upper Valley LDR	Low Density Residential	1	5
c. Golf Course LDR	Low Density Residential	1	34
d. Greater Happy Valley:			
Inside Loop	Semi-rural Density Residential	71	13
Outside Loop	Semi-rural Density Residential		
	Spotorno Flat		22
	Other Parcels	31	30
e. Golf Course	Municipal Golf Course	2	0
f. Open Space	open space	5	0
Total		111	179

Source: City of Pleasanton and Mundie & Associates



104 Parcel



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Figure 3
Parcels

Source: City of Pleasanton

F. ENVIRONMENTAL ISSUES AND USES OF THIS EIR

1. Purpose of EIR

An environmental impact report is a public information document that identifies potential significant environmental effects of a proposed project and recommends measures that can be taken to mitigate those impacts.

a. Applicability of the California Environmental Quality Act

An environmental impact report (EIR) is required under the provisions of the California Environmental Quality Act (CEQA), 1970, for all proposed projects that require discretionary action by a governmental body and that could potentially have significant effects on the environment.

The basic purposes of this law are described in the State CEQA Guidelines (§15002), as follows:

- (1) Inform governmental decisionmakers and the public about the potential significant environmental effects of proposed activities.
- (2) Identify ways that environmental damage can be avoided or significantly reduced.
- (3) Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible.
- (4) Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

According to the State CEQA Guidelines (§15378), a project is the whole of an action which has a potential for resulting in a direct or ultimate physical change in the environment. A project is defined by CEQA as any of the following:

- (1) An activity directly undertaken by any public agency including but not limited to public works construction and related activities, clearing or grading of land, improvements to existing public structures, enactment and amendment of zoning ordinances, and the adoption and amendment of local general plans or elements thereof pursuant to Government Code Sections 65100-65700.
- (2) An activity undertaken by a person which is supported in whole or in part through public agency contracts, grants, subsidies, loans, or other forms of assistance from one or more public agencies.
- (3) An activity involving the issuance to a person of a lease, permit, license, certificate, or other entitlement for use by one or more public agencies.

Discretionary actions (for which CEQA review is required) are defined by the Guidelines as “situations where a governmental agency can use its judgment in deciding whether and how to carry out or approve a project” (§15002(i)). Discretionary actions are distinguished from “situations where the public agency or body merely has to determine whether there has been conformity with applicable statutes, ordinances, or regulations” (§15357).

Under the terms set forth in State law and the CEQA Guidelines, Pleasanton's approval of General Plan amendments, a specific plan, rezoning, and annexation of the site are considered "discretionary" actions and, therefore, constitute a CEQA project.

The preparation of this EIR has taken place in tandem with the preparation of the Specific Plan. The Plan has taken advantage of concurrent CEQA review by incorporating provisions that avoid or minimize adverse impacts that might otherwise be associated with the Plan. In each subject heading of Chapter 3, the characteristics and features of the project with respect to that particular topic (Land Use, Drainage, Water Supply, etc.) are identified. Many of these provisions operate to "pre-mitigate" impacts that would otherwise occur, thereby reducing both adverse impacts and the mitigation requirements.

b. Program and Project EIR

This document is an EIR that addresses General Plan amendments, Specific Plan adoption, and rezoning of approximately 860 acres of land preparatory to annexation to the City of Pleasanton, followed by development of the municipal Golf Course and other uses.

The Specific Plan encompasses a series of planning and development actions, summarized below.

(1) Planning Actions. The project includes:

- **Amendment to the Pleasanton General Plan Map.** Table 4 identifies General Plan Map amendments required for Specific Plan consistency.

**Table 4
General Plan Map Amendments Required for Specific Plan Consistency**

Area	General Plan Acreage	Current General Plan Designation	Proposed General Plan Map Amendment Required for Specific Plan Consistency
Golf Course	145	Parks and Recreation	Replacement of 20 acres of Parks and Recreation (golf) with 20 acres of LDR
City Open Space Surrounding the Golf Course plus 10 acres of Lot 110	181	Public Health and Safety/ Wildlands Overlay	Replacement of 40 acres of Public Health and Safety/Wildlands Overlay with 40 acres of Parks and Recreation (golf) to accommodate a portion of the Golf Course
Bypass Road	—	Public Health and Safety	Extension of collector street from Spotorno Upper Valley MDR area south to the Golf Course
Greater Happy Valley Housing Density	—	—	Change of the second line of the "Low Density Residential" description in the General Plan Map legend to read: "One dwelling unit per two gross acres, with one unit per one-and-one-half gross acres when developed in conjunction with a major open space land use dedication."

Source: Happy Valley Specific Plan

- **Amendment to the Pleasanton General Plan Text.** The text of the Land Use Element (p. II-8 of the General Plan, paragraph 4, sentence 3) must be changed to read as follows (underlined words added): “The Happy Valley area that is designated as Low Density Residential shall have a two-acre maximum housing density, with one-and-one-half acre maximum density when developed in conjunction with major open space land dedication.”
- **Adoption of a Specific Plan for the Plan Area.** The specific land uses, infrastructure, and other development characteristics permitted by the Specific Plan are described below.
- **Prezoning of the Plan Area to a series of PUD districts.**
- **Annexation of the Plan Area to the City of Pleasanton.**
- **Securing of permanent open space** through zoning, easements, and/or public land acquisition of approximately 360 acres located primarily in the hills that form the eastern, southern, and southwestern boundaries of the site. Approximately 131 acres of this land would be owned by the City of Pleasanton; the remainder would remain in private ownership and/or be dedicated to another public agency or non-profit entity as public open space.

(2) Land Use and Development Actions. Projects that would be completely covered by this EIR, and are therefore included in the definition of the project, include:

- **Development of a golf course** of 18 holes on approximately 165 acres. The Golf Course would be owned by the City of Pleasanton and would be open to the public. An estimated 75,000 rounds of play per year are anticipated.
- **Provision for golf course housing** of up to 34 additional housing units. These 34 sites would be clustered in two areas encompassing a total of 20 acres at the edges of the Golf Course. The City proposes to use these homesites to help finance the development of the Golf Course and the Bypass Road (described below).
- **Residential development** on approximately 20 acres of the Spotorno property in the north-eastern quadrant of the site. Five acres would be developed as Low Density Residential accommodating up to five new units and 15 acres as Medium Density Residential accommodating up to 75 units.
- **Residential development** on approximately 33 acres of the Spotorno Flat Area, located immediately north of the Golf Course site, to include up to 22 new homes at a density of one home per one and one-half acres.

(3) Provision of New Circulation Facilities. New circulation facilities to be provided in the Specific Plan Area, and covered by this EIR, include:

- **A “Bypass Road”** to serve development of the Spotorno properties and Golf Course. This road would supplement current access, which is limited to the Happy Valley Loop.

The Bypass Road would begin at the point where the Happy Valley Specific Plan Area abuts the eastern boundary of the North Sycamore Specific Plan (NSSP) area, near the site of the City water tank. The East/West Collector to be built as one of the NSSP improvements would end at that point. The Bypass Road would provide a continuation of the East/West Collector,

extending generally southeast through the Spotorno Upper Valley and then southwest, entering the Golf Course and terminating at that point.

- **Trails**, implementing the trail concepts illustrated in the Pleasanton General Plan Map, to serve both developed and open space areas of the Specific Plan Area.
- **Emergency vehicle access (EVA) routes** (1) to/from the Golf Course along an extension of Happy Valley Road east of Alisal Street, (2) from the south end of Laura Lane south to Happy Valley Road (future), (3) between Mockingbird Lane and East Mockingbird Lane; and (4) between the Spotorno Flat Area and Alisal Street. These routes are described and mapped in the Specific Plan (Chapter VI; Figure IV-2).
- **Three improvements to local streets** (1) increasing the radius of the curve on Happy Valley Road at Lot 57, (2) adding a paved shoulder of up to three feet on the inside edges of Alisal Street and Happy Valley Road, and (3) adding YIELD-sign for westbound traffic at the existing railroad trestle undercrossing located on Happy Valley Road west of the Plan Area.
- **Potential construction-period access** via a temporary gravel road along the Bypass Road alignment, in the event that the Bypass Road is not constructed in time to serve the Golf Course and Golf Course Housing during construction. (If the provision of temporary access in this way proves infeasible, alternatives utilizing existing streets are specified in the Specific Plan, Chapter VI, Section B.9.)

(4) Provision of Infrastructure. Public facilities to be provided in the Specific Plan Area include:

- **Water.** New water mains will be installed in road rights-of-way to connect the Golf Course, and new and existing residential areas to the City's water distribution system. (A detailed description of the water supply system is presented in Chapter 3, Part E.)
- **Sanitary Sewer.** New sewer lines will also be installed to connect the Golf Course and new and existing residential areas to the City's sewer collection system. Like the water lines, the sewer lines will be located in road rights-of-way. (A detailed description of the sanitary sewer system is presented in Chapter 3, Part F.)
- **Storm Drainage.** Development on the Golf Course and Spotorno properties will be designed to reduce the volume of storm water runoff into Happy Valley Creek during peak-flow periods. Facilities such as detention basins, wet ponds, and grass swales will be integrated into specific projects; in addition, minor improvements will be made to improve the flow in Happy Valley Creek, reduce sheet flow from storm water runoff on Happy Valley Road, and reduce flooding along Alisal Street near the Faith Chapel. (A detailed description of the storm drainage system is presented in Chapter 3, Part G.)

(5) Potential Additional Future Actions. Extension of City services would make possible additional future development on existing parcels in the Greater Happy Valley area (both inside and outside the Happy Valley Loop), as identified in Tables 2 and 3 above. There could be up to 43 of these large-lot infill units at a density of generally one unit per two acres.

With the exception of the housing in the Spotorno Flat Area that was noted above, development on these infill sites will be considered by the City on a case-by-case basis in response to applications by individual parcel owners, contingent on a finding of consistency with the Specific Plan. Connection to water

and sewer lines will be required before new residential uses will be permitted. Existing homes may connect to the new lines at the owners' option.

The potential site-specific impacts (drainage, geology and soils, public health and safety, biology, and cultural resources) of development of individual homes on individual lots in the Greater Happy Valley area are not covered by this EIR. To recognize the potential cumulative effect of the development of all the units that could be built in the area, the EIR addresses this development as a growth-inducing impact of the Specific Plan (because the provision of infrastructure would allow for future construction in the area).

The City of Pleasanton does not normally require environmental review of single-family projects containing fewer than five lots. Construction of new homes would, however, be subject to existing City, County, State, and Federal regulations that address the disturbance of special-status species habitats, jurisdictional wetlands, and waters of the U.S.; the identification and disposal of hazardous materials; the need for design and construction techniques that minimize potential risk from geologic hazards; the potential for increased storm water runoff; the possible discovery of previously-unidentified cultural resources; and other potential impacts.

c. Intended Uses of This EIR

(1) City of Pleasanton and the General Public. The City of Pleasanton is the lead agency for this EIR. The EIR is intended to be reviewed and used by the City of Pleasanton in considering City actions to approve and implement development of the site. These include General Plan amendments, approval of a Specific Plan, rezoning, and future development plans.

The City of Pleasanton is required to observe an orderly process for preparing, publishing, and formally considering this EIR and subsequent CEQA documents in order to reach decisions on the discretionary actions the documents address. This process provides for review of CEQA documents and the submittal of comments by other interested agencies and the general public.

(2) Other Agencies. Other public agencies are responsible agencies under CEQA, having review and permitting approval for certain actions required to authorize or implement the project. These include:

- **Alameda County.** Alameda County would be the lead agency for any signing relating to the underpass under the Alameda County Transportation Corridor, if signing is found to be needed.
- **Alameda County LAFCo.** LAFCo has authority to approve Pleasanton's application for annexation of the project area which is currently in unincorporated Alameda County.

To inform its consideration of the application for annexation, LAFCo requires the City to submit information specified in the Knox-Cortese Act (Section 56841). Some of this information is included in the EIR:

- Information about land area and land use are presented in this chapter (Tables 2 and 3, p. 6, and Table 4, p. 9).
- Information about population, land use, and proximity to other populated areas is included in Chapter 3, Part A (Land Use).
- Information about topography, natural boundaries, drainage basins is presented in Chapter 3, Part G (Drainage).

- Information about the need for selected organized community services, the availability of those services, and the impact of potential development on the adequacy of those services is presented in Chapter 3, Parts E (Water), F (Sanitary Sewer), M (Parks and Recreation), N (Police), and O (Fire Protection).
- Information on the likelihood of significant growth in the area and in adjacent incorporated and unincorporated areas during the next 10 years is provided in Chapter 3, Part A (Land Use) and Chapter 5 (Cumulative and Growth-Inducing Impacts).
- Information about effects of the proposal on agricultural land is provided in Chapter 3, Part A (Land Use) and Chapter 5 (Cumulative and Growth-Inducing Impacts).
- Information about the boundaries of the project is provided in this chapter (Figure 1; Table 2).
- Information about consistency with the Pleasanton General Plan is provided in Chapter 4 (Alternatives; in particular, Alternative 5 describes development consistent with the Alameda County General Plan) and Chapter 7 (Consistency with Local Planning).

LAFCo may use the relevant information in this EIR in combination with the Specific Plan document as a reference when considering the future annexation application.

- **Alameda County Flood Control and Water Conservation District, Zone 7 (Zone 7) and the State Water Resources Control Board (SWRCB).** Any development that disturbs more than five acres of land must obtain and comply with the State Water Resources Control Board's General National Pollutant Discharge Elimination System (NPDES) Permit for storm water discharges associated with construction activity. Zone 7 has a General NPDES Permit and will require the project to apply for inclusion under this general permit for the construction activity associated with the project. This issue is discussed further in Chapter 3, Part G.

In addition, any development that disturbs more than five acres of land must obtain a General Construction Activity Storm Water Permit from the SWRCB.

- **California Department of Fish and Game (DFG).** The California Department of Fish and Game (DFG) has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species (Fish & Game Code Section 1802). DFG also has regulatory authority wherever water flows in the State of California, including ditches that are dug for flood control.

Consultation with DFG will be required to determine if focused surveys for California tiger salamander need to be conducted in the study area, if the project may result in a take of this species, and what mitigation, if any, will be required.

Consultation with DFG will also be required prior to any project activity that will divert, obstruct, or change the natural flow or the bed, channel, or bank of any river, stream, or lake. If required, a Section 1601-1603 Streambed Alteration Agreement will be requested from DFG by the City of Pleasanton prior to commencement of construction. A revegetation and erosion control plan may be required as part of the agreement. Fees are required for Streambed Alteration Agreements based on construction costs of a project.

- **California Regional Water Quality Control Board (RWQCB).** If a Section 404 permit is required by the Corps (see below), a Water Quality Certification must be requested from the RWQCB. In accordance with General Condition 9 of a Nationwide Permit, a Water Quality

Certification or waiver from the Board must be obtained before the Section 404 permit can become effective.

- **U.S. Army Corps of Engineers “404” Permit.** Under Section 404 (33 U.S.C. 1344 of the Clean Water Act (CWA), as amended, the Corps of Engineers retains primary responsibility for permits to discharge dredged or fill material into waters of the United States. The Corps takes jurisdiction under Section 404 for traditionally navigable waters; all interstate waters, including interstate wetlands, all other waters including lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce; all impoundments of water that fit these definitions; territorial seas; and wetlands adjacent to other waters, other than adjacent to other wetlands (33 C.F.R. 328.3).

The project may be permitted under a Section 404 Nationwide general permit from the Corps provided that the activity meets certain criteria, including:

- a. The discharge does not cause the loss of more than three acres of waters of the U.S. and/or wetlands, or loss of waters of the U.S. for a distance greater than 500 linear feet of the stream bed.
- b. For discharges causing the loss of greater than one-third acre of waters of the U.S. and/or wetlands, an application is made to the Corps for a Section 404 Nationwide permit.

The Corps may permit the project under a Section 404 Individual permit if the activity exceeds the three-acre and 500-linear-foot limits.

A jurisdictional delineation has been completed for this EIR and the findings are reported in Chapter 3, Part J. An application will be made to the San Francisco District of the Corps for the appropriate Section 404 permit. The permit conditions will be followed by the applicant. If required as a result of permit conditions, wetland mitigation measures would be documented in a formal Wetland Mitigation and Monitoring Plan that would be submitted to the U.S. Army Corps of engineers as an appendix to a Pre-Construction Notification.

- **U.S. Fish and Wildlife Service (USF&WS).** The Corps is required under Section 7 of the Endangered Species Act (16 U.S.C. 1536) to consult with the U.S. Fish and Wildlife Service to insure that any actions authorized by the Corps do not jeopardize the continued existence of any endangered species or threatened species, or result in the destruction or adverse modification of habitat of such species which is determined to be critical.

When listed species or designated critical habitat are in the proposed project area, a biological assessment must be prepared to determine if the proposed project may affect a listed species or its habitat. Based on the biological assessment, the Corps initiates formal consultation with the USF&WS and requests a biological opinion. A biological opinion must be obtained from USF&WS prior to the issuance of any grading permits that affect California red-legged frog habitat.

- **Other Permits.** Future projects that may be undertaken by other public agencies, as well as City of Pleasanton projects that are not explicitly covered by this EIR, will be required to undergo their own environmental review. Those reviews would be expected to use this EIR as a resource document.

2. Environmental Issues

The Notice of Preparation (NOP) and Initial Study Environmental Checklist Form (IS) for this project were published March 5, 1997, identifying a number of issues for consideration in the EIR. The NOP and IS are presented in Appendix A.

In response to the NOP, the City of Pleasanton received 11 written communications touching on environmental issues relating to the Specific Plan. The City also received public input at an EIR scoping meeting held on April 30, 1997. The written communications and a transcript of the public scoping meeting are on file at the City Planning Department.

CHAPTER 3

SETTING, IMPACTS, AND MITIGATION MEASURES

A. LAND USE

1. Project Characteristics

The project would result in planning actions including adoption of the Happy Valley Specific Plan and amendment of the Pleasanton General Plan. These actions would allow subsequent rezoning, annexation and development approvals leading to construction of housing, a municipal Golf Course, and infrastructure improvements as described in Chapter 2 (Project Description). The project would also maintain in their undeveloped state lands designated for open space in the City's General Plan and the Alameda County East County Area Plan.

Figure 4 shows the land use and circulation pattern proposed by the Specific Plan.

2. Setting

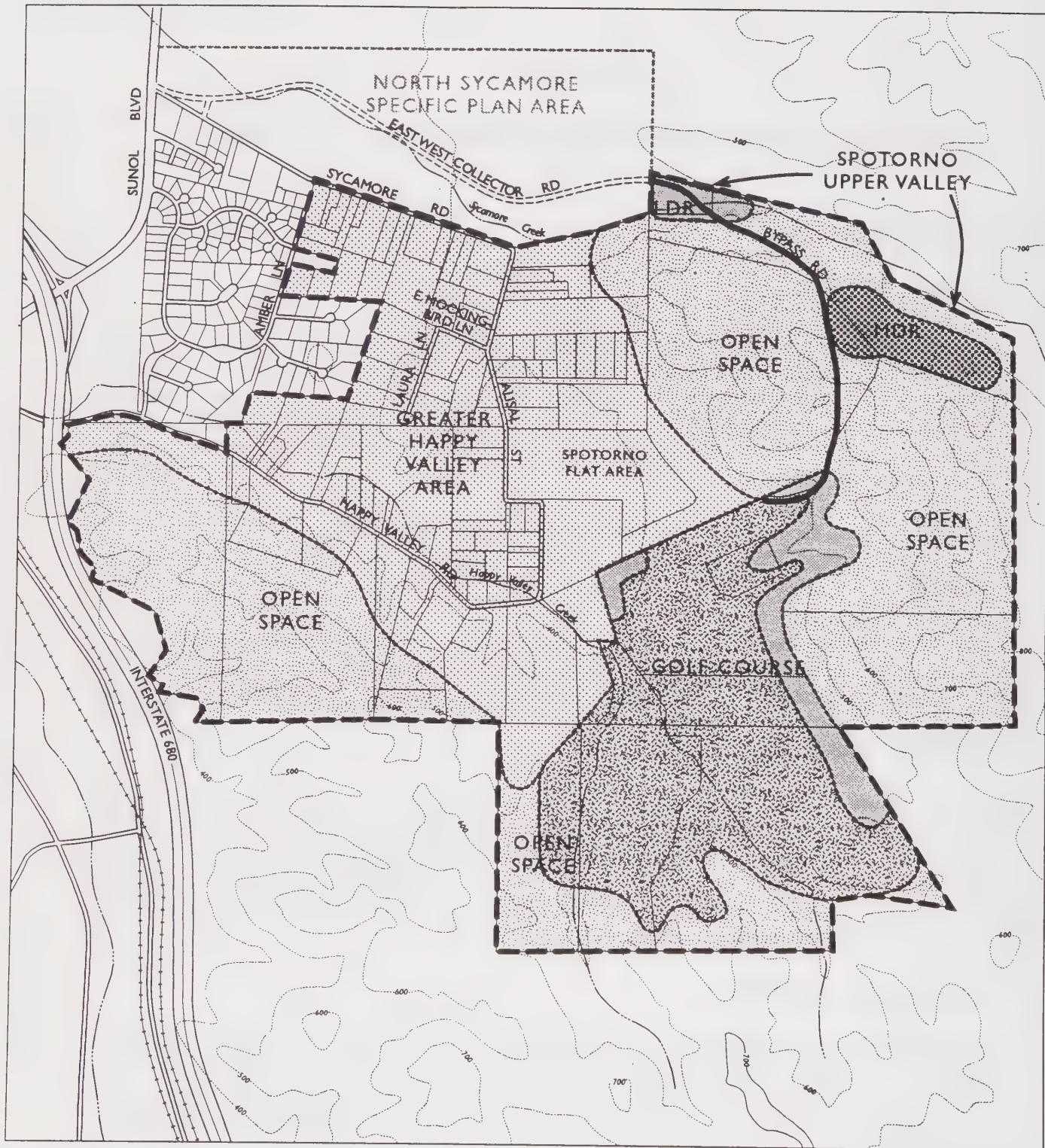
Located at the southern edge of the City of Pleasanton, the Plan Area forms a transition from adjacent urban areas to open space. This transition is and will continue to be marked by both land uses and natural features, such as topography. As is discussed below, the transition is reinforced by jurisdictional boundaries and planning policies established by the City of Pleasanton and Alameda County. Figure 5 shows the Happy Valley's land use context.




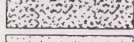


The site is in private ownership, with relatively small parcels (72 percent are between 0.5 and 5 acres) characterizing the areas inside and immediately outside of the Happy Valley Loop (formed by Sycamore Road, Alisal Street and Happy Valley Road) and significantly larger parcels (up to 125 acres) characterizing the other subareas outside of the Loop. Implementation of the Specific Plan would include public acquisition of approximately 316 acres, approximately 165 of which would be for Golf Course use and 20 acres for Golf Course home sites (see Chapter 2).

a. Existing Land Use Onsite

(1) Agriculture. Livestock grazing is the principal existing land use in the Golf Course, Golf Course Housing, Spotorno LDR and MDR, and Open Space subareas. The City's General Plan designates some areas of the Open Space subarea as Wildlands Overlay. The larger Southeast Hills area, of which the Plan Area open space is a part, incorporates biological diversity and forms a bridge between the Pleasanton Ridge Regional Park and wildlands in the San Antonio Reservoir area.

(2) Residential Development. Inside the Happy Valley Loop is a large-lot residential area of 74 parcels established over the past 35 years or more, now with a total of 71 housing units. The area has a semi-rural character, with ranchettes ranging from 0.5 to 5 acres and horses and other livestock kept on many parcels.



-  Semi-Rural Density Residential (generally 1 unit/2 acres)
-  Low Density Residential (2 units/acre)
-  Medium Density Residential (5 units/acre)
-  Golf Course
-  Open Space
-  Bypass Road

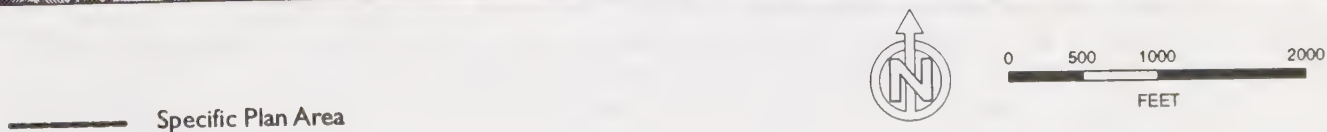
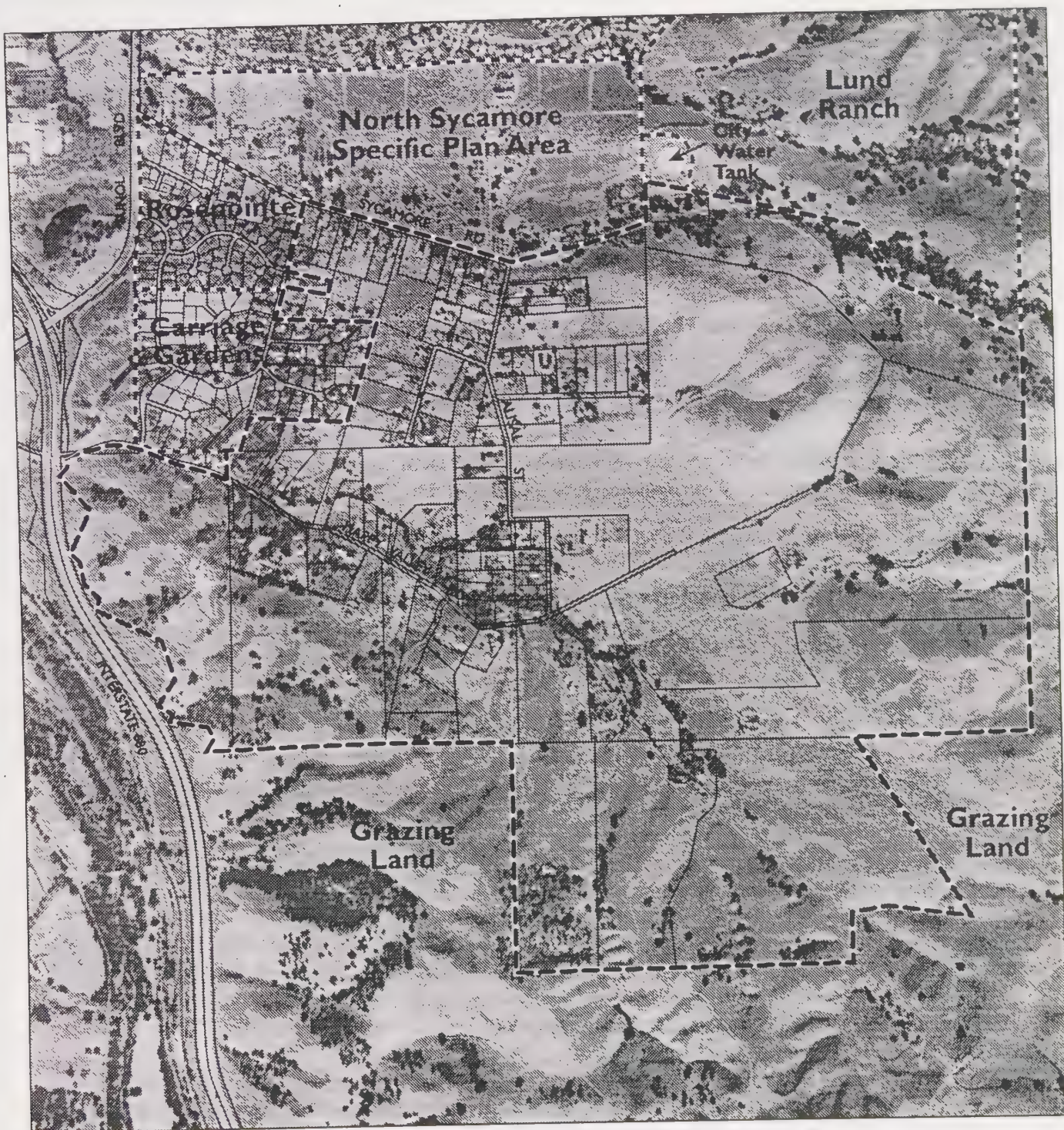


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Figure 4

Specific Plan Land Use Pattern and Circulation System

Source: City of Pleasanton



Source: City of Pleasanton

Figure 5
Happy Valley Land Use Context

Outside the Happy Valley Loop are 23 parcels east of Alisal Street with a total of 17 housing units, and another 16 parcels with 17 units south of Happy Valley Road.

Four additional residences are in the Study Area:

- The Spotorno Ranch house is in the northwest corner of the Spotorno Upper Valley LDR Subarea, and it is reached by private drive from the end of Sycamore Road. Existing development on the Spotorno Property (Lot 97) also includes a number of outbuildings
- Three single family detached homes are located on the approximately 185-acre site for the municipal Golf Course and Golf Course home sites. One of these properties (Manning, Lot 102) includes a barn building with historic character on the site (discussed in Chapter 3, Part K). The other homes are on Lots 103 and 105 (see Figure 3, p. 7).

(3) Other Uses. A church known as the Faith Chapel is also located in the Greater Happy Valley area. It adjoins the southern boundary of the Spotorno Flat area on Lot 99.

b. Existing Land Use on Neighboring Properties

North A portion of the Study Area's northern boundary is formed by Sycamore Road, with several developed rural residential properties immediately to the north. This area, which is addressed by the City's North Sycamore Specific Plan (NSSP), includes a number of parcels suitable for subdivision. The City is currently working with developers on development plans for a major portion of the NSSP.

East of the NSSP Area is the Lund Ranch property. Currently used for livestock grazing, Lund Ranch is designated by the City's General Plan for Open Space as well as Low and Rural Density Residential.

East Immediately east of the project site is the Foley Ranch. It is characterized by steeply sloping open space land currently used for grazing of livestock and designated for Open Space: Public Health and Safety/Wildlands Overlay by the Pleasanton General Plan.

South South of the Study Area are steeply sloping lands in open space/grazing. These lands form the northern edge of the greenbelt that separates the cities of the Tri-Valley from urban areas in Alameda and Santa Clara counties to the south.

The Little Valley area to the south is separated from the Study Area by open space. It contains 20 parcels and covers 293 acres. Parcels range from two to 45 acres, and are used predominantly for horse farms and estate lots. The Sky Ridge Horse Stable is located at the southern end of the area. The area's only vehicular access is provided by the private, dead end Little Valley Road, which has access only from SR 84. In July, 1997, Alameda County adopted a Specific Plan for the Little Valley area. The Plan will allow further subdivision and an overall density of approximately one unit per five acres.

Just east of Little Valley Road is the General Electric (GE) Vallecitos Nuclear Center. The Center's activities are discussed in Chapter 3, Part H. The GE land holdings on which the center is located comprise over 1,600 acres of the Vallecitos Valley. The facility itself is located

on a small portion of the total land (approximately 100 acres) in the southwest corner of the site, with access from SR 84. The remainder of the land is leased for cattle grazing.

West The Rosepointe and Carriage Gardens subdivisions containing single family homes adjoin the western edge of Greater Happy Valley. Rosepointe is built at approximately four units per gross acre. Carriage Gardens has lower densities, typically ranging from 2 to 2.5 units per gross acre. The southwestern portion of the Plan Area adjoins the I-680 right-of-way.

c. Urban Growth Boundaries

Both the City of Pleasanton and Alameda County have established Urban Growth Boundaries (UGBs) in order to achieve goals pertaining to land use planning, infrastructure efficiency, and open space preservation. As shown on Figure 6, portions of the UGBs of both the City and County are located in the Planning Area. The City's General Plan describes the UGB as follows:

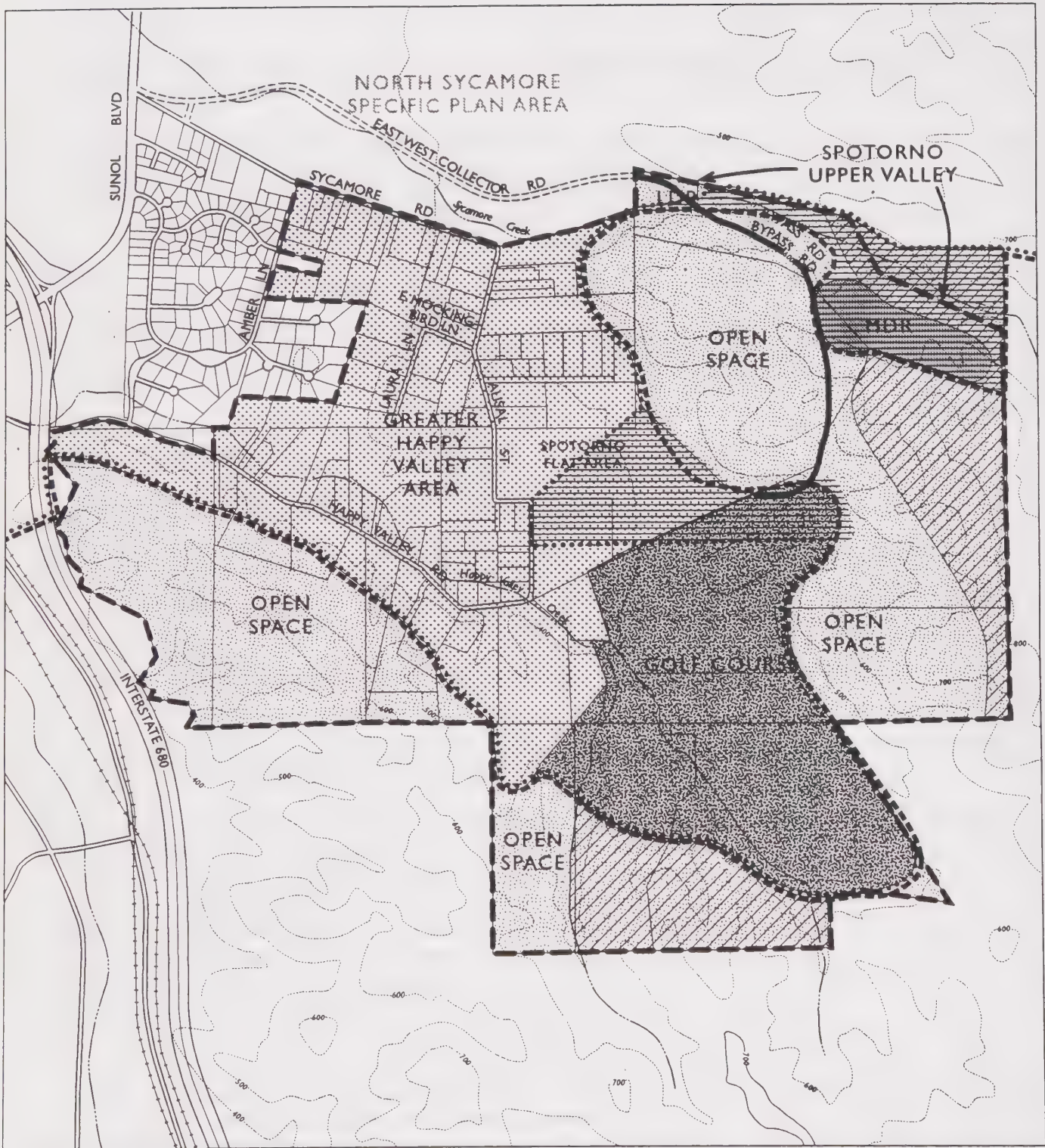
The General Plan Map designates an Urban Growth Boundary (UGB) line around the edge of land planned for urban development at General Plan Buildout. The line distinguishes areas generally suitable for urban development from areas generally suitable for the long-term protection of natural resources, large-lot agriculture and grazing, parks and recreation, public health and safety, subregionally significant wildlands, buffers between communities, and scenic ridgeline views. The UGB is intended to be permanent and to define the line beyond which urban development may not occur. (Pleasanton General Plan, p. I-4 and II-7)

Alameda County's East County Area Plan (page 1) defines the County UGB in very similar terms, as follows:








Goal: To clearly delineate areas suitable for urban development and open space areas for long-term protection of natural resources, agriculture, and public safety.

Policy 1: The County shall identify and maintain an Urban Growth Boundary (see Tables 1 and 2 and Figure 5 in the East County Area Plan) that defines areas generally suitable for urban development and areas generally suitable for long-term protection of natural resources, agriculture and other productive resources, recreation, buffers between communities, and public health and safety. The Urban Growth Boundary is intended to be permanent and to define the line beyond which urban development shall not be allowed. The County shall use the Urban Growth Boundary to provide certainty regarding development potential for long-term infrastructure financing, agricultural investment, and environmental protection.

The policy bases for the Urban Growth Boundaries are highly compatible. However, the City and the County have mapped boundaries with some differences in the Happy Valley Specific Plan Area, as shown in Figure 6. The Alameda County UGB splits a number of relatively large parcels outside of the Happy Valley Loop. In general, the City's UGB splits the same parcels but in somewhat different ways in order to reflect topography. The County excludes two small areas from its UGB, while these sites are included within the City's UGB. These two areas are the 15-acre MDR housing site in the Spotorno Upper Valley MDR subarea and part of the Spotorno Flat Area.



Pleasanton General Plan Designations

-  Low Density Residential: 0-2 units/acres
-  Medium Density Residential: 2-8 units/acre
-  Parks and Recreation
-  Open Space: Public Health and Safety
-  Open Space: Public Health and Safety/Wildlands Overlay
-  Pleasanton Urban Growth Boundary
-  Alameda County Urban Growth Boundary

Source: City of Pleasanton

 Area of difference between Alameda County and Pleasanton Urban Growth Boundaries



0 500 1000 2000
FEET

Figure 6

Planning Context

A portion of the Golf Course and perimeter trail will extend beyond the Urban Growth Boundary. This condition is permitted by the City and County, since both recognize open space recreation uses as appropriate outside of the Urban Growth Boundary.

3. Impacts

In addition to the land use impacts discussed in this section, the land use changes envisioned by the project would result in changes to various natural systems as well as to demand for public services and facilities. These are discussed in subsequent sections of this chapter.

a. Significance Criteria

Based on the CEQA Guidelines and City of Pleasanton policy, a project would have a significant land use effect if it would:

- Conflict with adopted environmental plans and goals for the community where it is located (CEQA Guidelines Appendix G, Item a).
- Disrupt or divide the physical arrangement of an established community (CEQA Guidelines Appendix G, Item u)
- Conflict with established recreational, educational, religious, or scientific uses of the area (CEQA Guidelines Appendix G, Item w).

b. Conversion of Unimproved Open Space to Residential and Recreational Use

The project would result in the conversion of approximately 250 acres of the 860-acre Plan Area from unimproved open space, largely in use for livestock grazing, into housing, roads, and municipal Golf Course use. This conversion is generally envisioned by the Pleasanton General Plan by the Alameda County *East County Area Plan* as well. The ECAP, because it does not anticipate the Golf Course, would permit construction of a considerably greater number of homes than would the project, as is discussed in Chapter 4 in connection with Alternative 5.

In addition to the conversion of unimproved open space, the Golf Course would result in the demolition and reconstruction of the existing Jordan home (Lot 103). The property owners, who are active participants in the Specific Plan process, will be fully compensated by the City of Pleasanton as a result of this change.

The project will also result in the loss of grazing land, and the construction of roads and residential uses, could reduce the feasibility of grazing operations on a portion of the open space area on the Spotorno property by separating it from a greater expanse of open space. One parcel in the Plan area is currently under Williamson Act contract: the 43.8-acre parcel (Lot 119, owned by Schaffer) south of Happy Valley Road. There is no land in the Plan Area designated as Prime Farmland or Farmland of Statewide Importance by the State Department of Conservation's Farmland Mapping and Monitoring Program. The Program designates areas within the Study Area as Grazing Land.

Cumulative Impact A1. Conversion of land from agricultural to urban use.
Land now in agricultural use would be converted to residential and Golf Course use.

c. Compatibility of Uses on Site

(1) Existing Residences and New Housing. The Specific Plan describes a pattern of land uses that features compatibility. In the Plan, residential uses of comparable densities adjoin already-developed properties, and the medium density residential development and the municipal Golf Course are separated from other uses by open space.

The potential for residential development in the Spotorno Flat area is regulated by the Plan to maintain the character of the Greater Happy Valley Area by (1) designating Semi-Rural Density Residential (one home per one and one-half acres), (2) requiring view corridors and open space corridors through new development “to provide maximum view potential of the Golf Course from Alisal Street,” and (3) specifying that larger lots are to be concentrated near Alisal Street. These requirements are intended to extend the rural character of Happy Valley through the potential new development area.

(2) Urban and Agricultural Activities. Development consistent with the Specific Plan would increase the amount of shared boundary between urban and agricultural activities in the Plan Area. The relatively low development densities in all subareas except for the Spotorno Upper Valley MDR Subarea permit site design which will buffer the residential activities from agricultural ones (and vice versa).

A number of factors combine to minimize the potential for impacts at the urban/agricultural edge, as follows:

- The Golf Course will reduce the potential for conflict, in part because course design includes topographic and vegetative features that separate recreational and agricultural open space.
- The low density character of residential uses permits site design which will buffer residential activities from agricultural ones. The Specific Plan states that building setbacks, which can contribute to buffer zones between residential areas and agricultural lands, will be determined at the time of PUD development plan approval.
- Prospective purchasers and renters of property located within the Plan Area will be given notice, in the form of a statement that they will be required to sign and will be included in their deed of sale or rental/lease agreement, that is intended to protect agricultural uses from nuisance lawsuits. This statement will read:

“You are hereby advised that this property is located near land zoned and/or used for agricultural purposes. Agricultural use is defined as including but not limited to day and night time activity relating to livestock grazing, the keeping of livestock, the growing and processing of agricultural crops, and any commercial agricultural practices performed as incidental to or in conjunction with such operations. Some of the impacts associated with agricultural use include but are not limited to noise, odors, dust, chemicals, refuse waste, unsightliness, use of agricultural equipment, and traffic. Permitted agricultural pursuits conducted in accordance with good practice and maintenance are not deemed by the City of Pleasanton to be a nuisance.”

- The existing character of Happy Valley ranchette properties, with horses or other livestock on many properties, already serves as a transition between conventional subdivisions and open space areas.

- Development of the Specific Plan area will result in City acquisition of the Golf Course properties and securing, through possible land acquisitions and conservation easements, other properties designated for open space uses on the Pleasanton General Plan. These mechanisms will ensure long-term preservation of open space uses.

(3) Golf Course and Adjoining Trails and Housing. Operation of the Golf Course will bring with it the potential for safety hazards to golfers, residents and users of the nearby trails. These hazards will be posed by stray golf balls which could cause injury. Such hazards will be minimized through the design of the Golf Course itself, as well as through careful design of housing sites and the perimeter trail (see the Specific Plan, Chapter V, Section 5.e.3.d).

d. Compatibility of Onsite Uses with Uses on Adjoining Properties

The City's planning efforts, including the General Plan, the North Sycamore Specific Plan (NSSP), and the Happy Valley Specific Plan, seek to guide land development in a manner that will establish and maintain compatibility between uses. To the north, the NSSP designates the area immediately north of Sycamore Road for Planned Unit Development – Agriculture in order to establish conformity with the predominant development type across Sycamore Road at the northern edge of the Happy Valley Study Area. The Lund Ranch property, located north of the Spotorno Upper Valley LDR Subarea, is also partially designated for open space and rural density residential. To the south, the Golf Course and Golf Course housing as well as parcels in the Greater Happy Valley Subarea outside the Loop will adjoin open space preserved for public health and safety and wildlife values. Housing at the western edge of the Plan Area will continue to adjoin residences with a more suburban character, typified by smaller lots and a more uniform street and lot pattern. All of these edges appear to be compatible and without characteristics that would impede successful occupancy, operations, or productivity of adjoining uses.

4. Mitigation Measures

Cumulative Impact A1. Conversion of land from agricultural to urban use.

This impact cannot be mitigated if development of uses permitted by the Specific Plan occurs.

B. TRANSPORTATION

1. Characteristics of the Project

Direct access to the Happy Valley Specific Plan Area is currently provided from Sunol Boulevard and Pleasanton-Sunol Road via the existing Happy Valley Loop. Additional vehicular access to the eastern and southern portions of the project site is proposed through a new roadway ("Bypass Road"), which would extend east of a planned road in the North Sycamore Specific Plan Area known as the "East/West Collector." Figure 7 places the project in its transportation context.

a. Proposed Roadway Improvements

The following roadway improvements are called for in the Specific Plan:

- A Bypass Road, described briefly above, that provides access to the eastern and southern portions of the site.
- Smoothing and widening of the curve on Happy Valley Road at Lot 53.
- Placing a YIELD-sign for westbound traffic at the existing railroad trestle undercrossing located on Happy Valley Road west of the Plan Area. This improvement would be located outside the City of Pleasanton, and requires cooperation with Alameda County.
- Widening the inside shoulder of Alisal Street and Happy Valley Road.
- The addition of several emergency vehicle access routes (EVAs).

The following circulation subalternatives were also considered but *dismissed* because potential circulation benefits were generally outweighed by the anticipated environmental impacts. Figure 8 illustrates the proposed project site and circulation subalternatives.

- **Circulation Subalternative A, the Alisal Street north-south connection to the East/West Collector**, would be implemented in conjunction with Subalternative C in order to provide an access point from the Happy Valley Loop to the East/West Collector. This subalternative would be applicable under General Plan buildout conditions because the Bypass Road would not be constructed and the majority of project traffic would otherwise use Sycamore Road. To deter non-local traffic from Sycamore Road, access to Sycamore Road from Alisal Street and the East/West Collector would need to be restricted. This circulation subalternative could potentially remove 550 vehicles per day (VPD) from Sycamore Road.
- **Circulation Subalternative B, the indirect connection of the Bypass Road through the Golf Course Area to Happy Valley Road**, would provide a through connection between the Happy Valley Loop and the Bypass Road.
- **Circulation Subalternative C, access to the Golf Course through the Spotorno Flat Area**, would be implemented with Subalternative A as described above.
- **Circulation Subalternative D, a Laura Lane connection to Happy Valley Road**, would affect circulation from both existing and future homes along the northern segment of Alisal Street, East Mockingbird Lane, and Laura Lane. This alternative could potentially remove 260 VPD from the southern portion of Alisal Street under the proposed project.

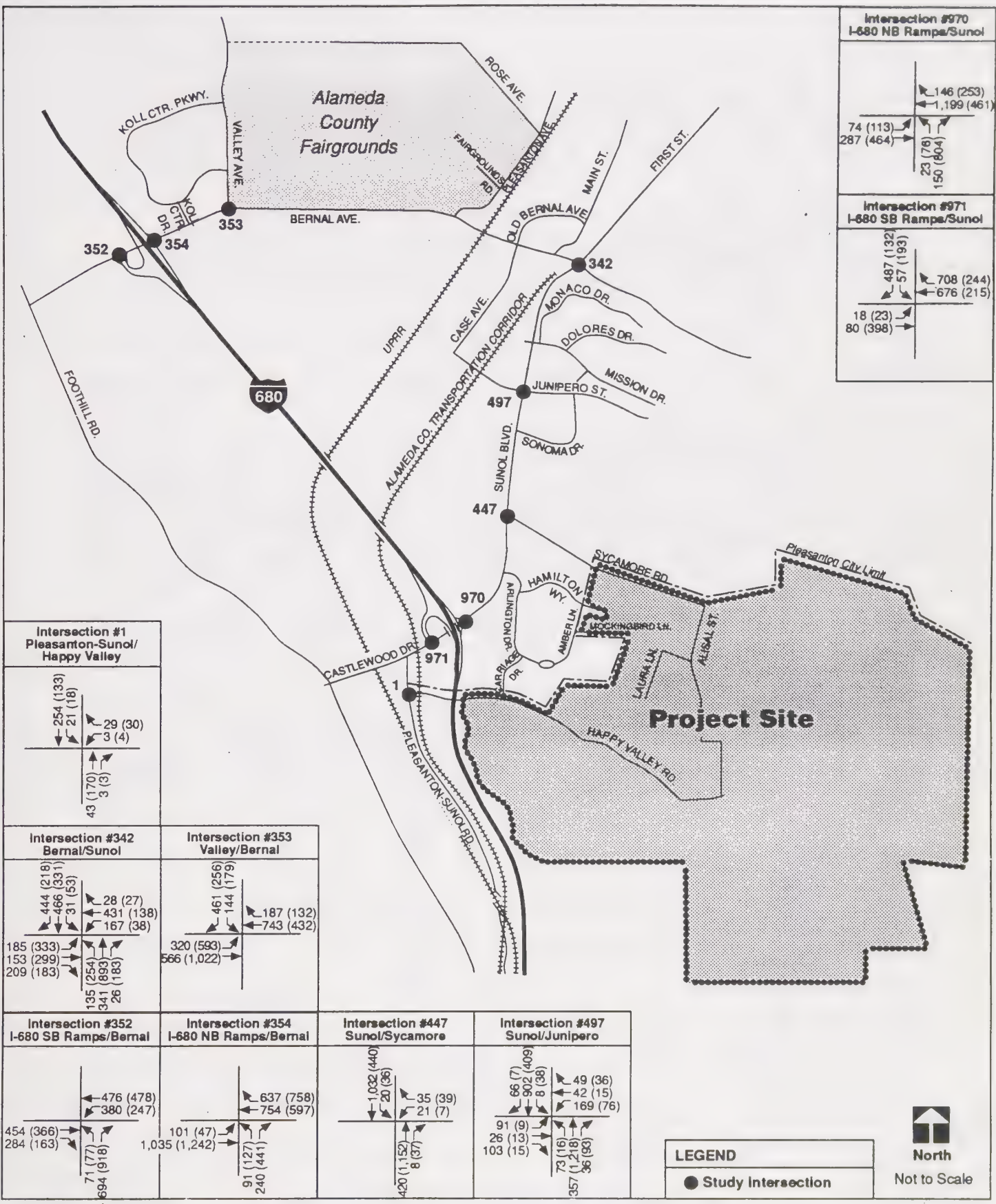


Figure 7

Transportation Study Area and Existing Turning Movement Volumes

Source: TJKM

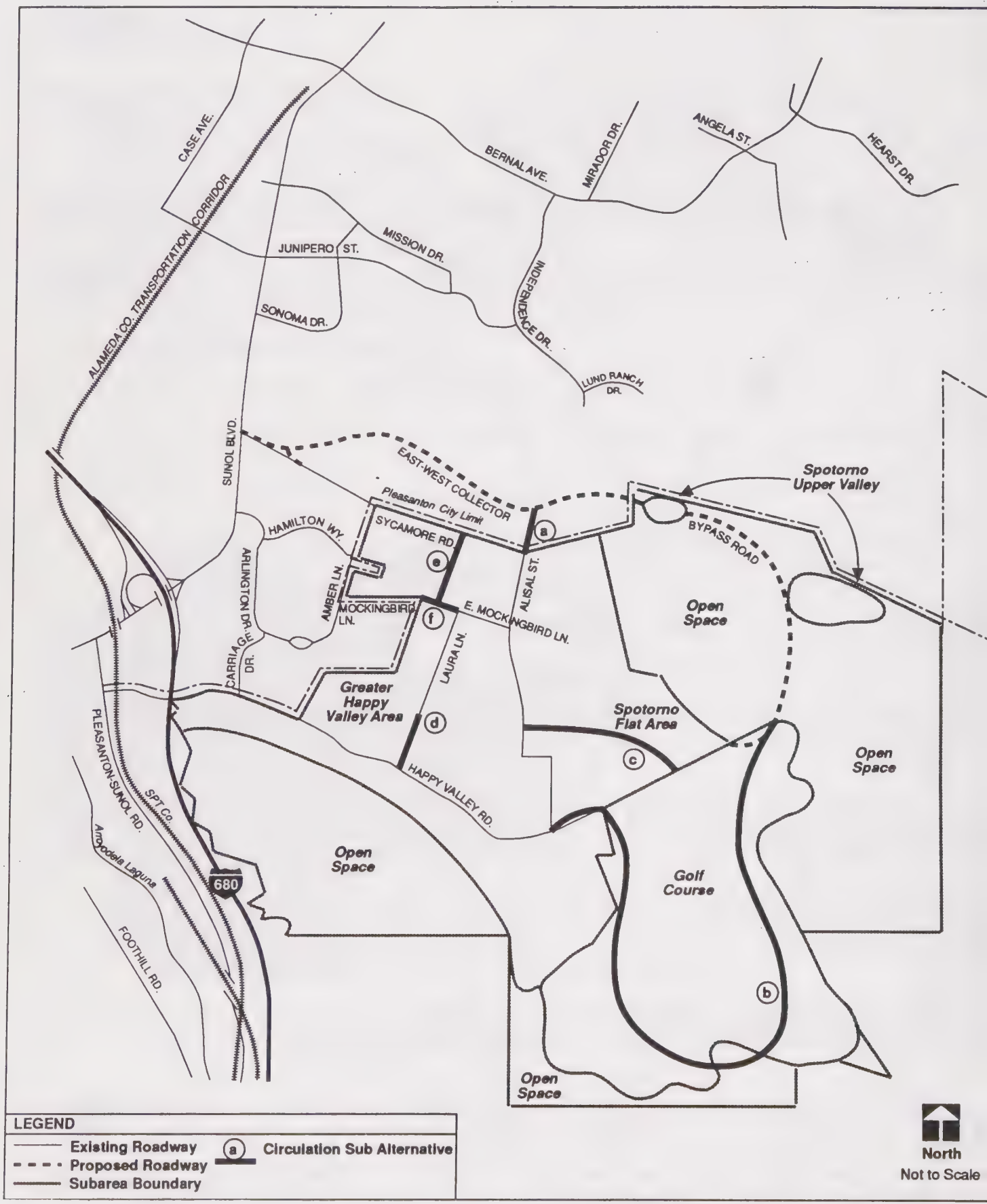


Figure 8

Circulation Subalternatives

Source: TJKM

- **Circulation Subalternative E, a Laura Lane connection to Sycamore Road**, would affect circulation from both existing and future homes on East Mockingbird Lane and Laura Lane. This alternative could potentially remove 90 VPD from the northern portion of Alisal Street under the proposed project.
- **Circulation Subalternative F, a Mockingbird Lane connection to East Mockingbird Lane**, would affect circulation from both existing and future homes on Alisal Street, Sycamore Road, East Mockingbird Lane, and Laura Lane. This alternative could potentially shift 200 VPD from Sycamore Road to Mockingbird Lane/Amber Lane under the proposed project.

b. Project Trip Generation Characteristics

Estimates of future traffic were projected using the Pleasanton Citywide Traffic Model. This traffic forecasting tool was first developed as part of the 1986 Pleasanton General Plan. It contains specific information regarding the City's land use and street network. The model takes into account likely peak hour route choices and assigns future traffic to the local street system. TJKM used the direct model output to evaluate operating conditions at nine intersections on the local roadway network surrounding the Plan Area. Based on a detailed analysis of expected land use and roadway conditions within the Plan Area, TJKM adjusted the traffic model results at three intersections nearest the Plan Area, including the Sunol Boulevard intersections with Sycamore Road, I-680 Northbound Ramps, and I-680 Southbound Ramps, and derived volumes for the intersection of Pleasanton-Sunol Road/Happy Valley Road.

The daily trip generation assumptions for the Happy Valley area buildout are based on information contained in *Trip Generation* (Institute of Transportation Engineers, Fifth Edition, 1991). The trip rates for the Golf Course and medium-density housing were calculated directly from this source. Trip rates for low-density housing, however, were modified to account for conditions specific to the Happy Valley area. To derive the appropriate rate, daily traffic volumes at two locations were subtracted to determine traffic volumes generated along that roadway segment and the resulting volume was divided by the number of homes taking access from the roadway segment. This calculation was performed for two roadway segments and averaged to obtain the trip rate of 12.8 trips per dwelling unit per day used in the analysis. Detailed trip generation assumptions for the proposed project are summarized in Table 5.

Table 5
Peak Hour Trip Generation: Proposed Project

Land Use	Size	A.M. Peak Hour					P.M. Peak Hour				
		Trip Rate	In:Out Ratio	VTE*			Trip Rate	In:Out Ratio	VTE*		
Single-Family	179 du**	0.80	30:70	43	100	143	1.00	70:30	125	54	179
Golf Course	1 site**	40	90:10	36	4	40	40	70:30	28	12	40
Total				79	104	183			153	66	219

* VTE = vehicle trip ends

** du = dwelling units; 1 site assumes 18-hole Golf Course

Source: TJKM Transportation Consultants

Based on the assumptions summarized in Table 5, the estimated trip generation for the proposed project is 183 vehicular trips during the a.m. peak hour and 219 during the p.m. peak hour on a typical weekday.

c. Project Trip Distribution

The project trip distribution assumptions for the local roadway network are illustrated in Figure 9. These assumptions are based on distribution patterns resulting from the City of Pleasanton traffic model.

Trip distribution assumptions within the project site were further refined based on the internal roadway system and location of development for each subarea. Table 6 delineates these distribution assumptions. For this analysis, it was assumed that 306 dwelling units of the North Sycamore and Lund developments would use the East/West Collector, generating 3,060 daily trips on this roadway.

d. Construction-period Traffic Disruptions

Construction of the water and sewer systems as well as the Golf Course could disrupt traffic on local roads in the Plan Area. The Specific Plan addresses these potential disruptions with the following requirements:

- **Construction Timing:** construction of the Golf Course, housing, road, infrastructure, and other site improvements is limited to the hours of 8:00 AM to 5:00 PM, Monday through Saturday. (Specific Plan, Section V.D.8.a.) This regulation is intended to minimize the potential for construction vehicles to interfere with normal residential-area traffic as well as the potential for construction activity in the right-of-way (e.g., for water and sewer system installation) to pose hazards to normal vehicular traffic.
- **Routing of Construction Vehicle Traffic:** the Specific Plan (Section V.D.8.b) requires construction vehicles en route to development sites on the Spotorno Property, including both the Spotorno Upper Valley Area and the Spotorno Flat Area, to use the Bypass Road, and delineates a series of alternative routes, appropriate to different conditions, for construction vehicles en route to the Golf Course and Golf Course Housing areas. Like the construction timing regulations, these routing requirements are intended in part to minimize disruption to normal traffic operations.

2. Setting

a. Existing Conditions

(1) Regional and Local Access. The project transportation study area and analysis locations include four offsite intersections along with four freeway on- and offramps at the Sunol Boulevard and Bernal Avenue interchanges with Interstate 680. The transportation characteristics of the project vicinity are shown in Figure 7 (p. 27).

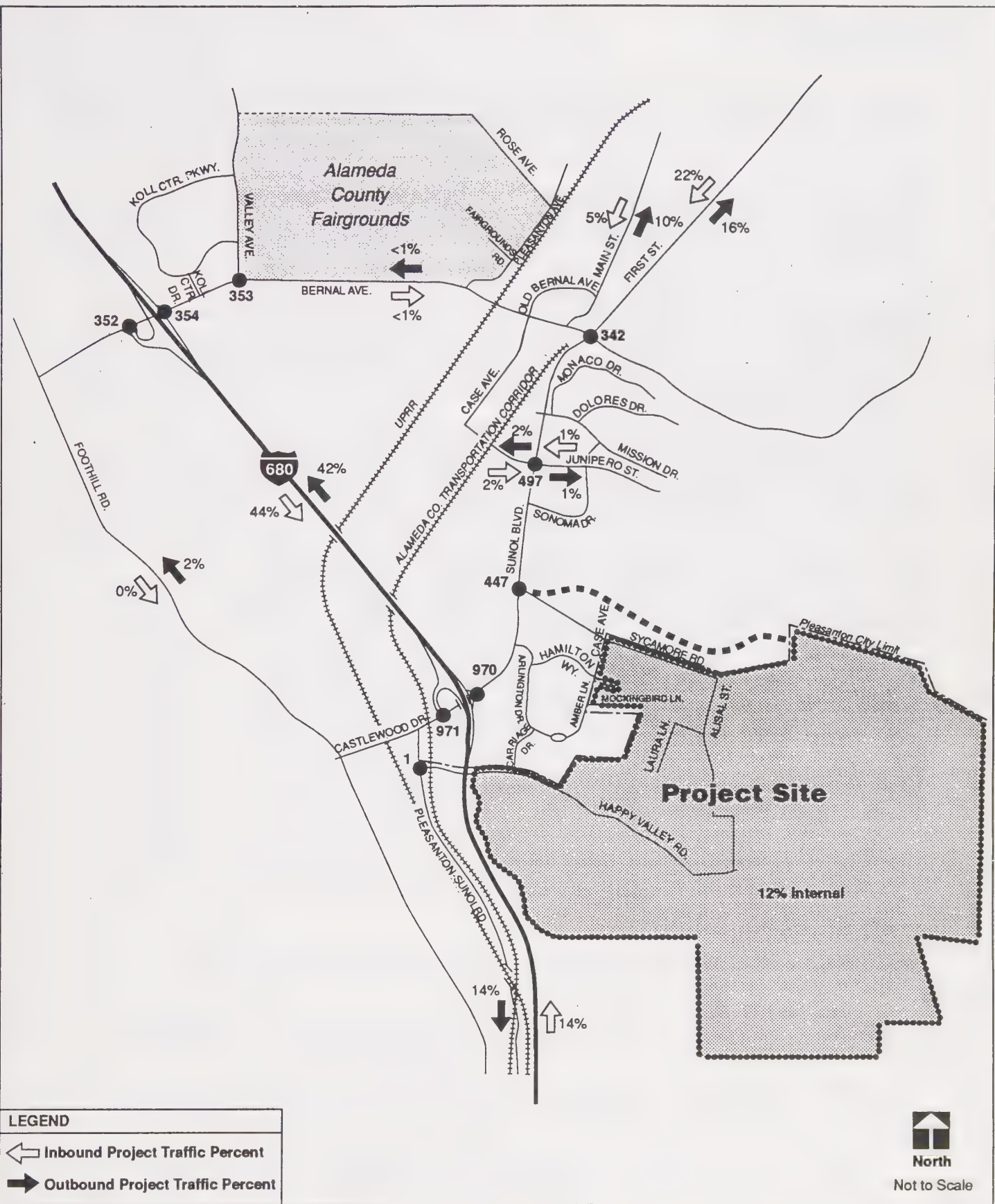


Figure 9

Source: TJKM

Project Trip Distribution Assumptions

Table 6
Daily Trip Generation and Assignment: Proposed Project

	Golf Course Properties		Spotorno Upper Valley		Greater Happy Valley Area	Total
Land Use	Golf Course	LDR	MDR	LDR	LDR	
Size	18 holes	34 du	75 du	5 du	65 du	
ADT						
Trip Rate	37.59	12.8	10	12.8	12.8	
Total	677	435	750	64	832	2,758
Percent of Project Traffic on Roadway Segment:						
1	100.0%	100.0%	100.0%	100.0%	32.1%	79.5
2	0.0%	0.0%	0.0%	0.0%	32.1%	9.7
3	100.0%	100.0%	100.0%	100.0%	0.0%	69.8
4	0.0%	0.0%	0.0%	0.0%	30.2%	9.1
5	0.0%	0.0%	0.0%	0.0%	30.2%	9.1
6	0.0%	0.0%	0.0%	0.0%	30.2%	9.1
7	0.0%	0.0%	0.0%	0.0%	67.9%	20.5
8	0.0%	0.0%	0.0%	0.0%	67.9%	20.5
Project Traffic Volumes on Roadway Segment:						
1	677	435	750	64	267	2,193
2	0	0	0	0	267	267
3	677	435	750	64	0	1,926
4	0	0	0	0	251	251
5	0	0	0	0	251	251
6	0	0	0	0	251	251
7	0	0	0	0	565	565
8	0	0	0	0	565	565

Source: TJKM Transportation Consultants

(a) Road Network. Important roadways serving the project site are described below:

Interstate 680 (I-680) is a six-lane freeway in the vicinity of the project site. I-680 carries between 97,000 and 109,000 vehicles per day¹ with interchanges at Bernal Avenue and Sunol Boulevard.

Bernal Avenue is a two- to four-lane east-west arterial that provides access to much of southern Pleasanton. East of I-680, the posted speed on Bernal Avenue is generally 45 miles per hour (mph).

Sunol Boulevard is a two- to four-lane north-south arterial extending from Bernal Avenue south to I-680 and providing access to the southernmost area of Pleasanton. North of Bernal Avenue,

¹ 1995 Traffic Volumes on California State Highways, Caltrans, 1996.

Sunol Boulevard becomes First Street. In the vicinity of the proposed project, Sunol Boulevard has two lanes with bike lanes. The posted speed limit on this roadway is 45 mph. Primary access to and from the site is proposed from Sunol Boulevard.

West Las Positas Boulevard is a four-lane east-west arterial that originates at Foothill Road and provides access to other major Pleasanton arterials, including Hopyard Road and Santa Rita Road. A future partial cloverleaf interchange with I-680 is planned; however, other alternatives are being considered by the City of Pleasanton at the present time.

Pleasanton-Sunol Road is a two-lane north-south roadway that parallels I-680 south of Sunol Boulevard and informally serves as an alternate route to I-680 when there is severe congestion on this freeway. The posted speed limit on Pleasanton-Sunol Road in the vicinity of the proposed project is 45 mph. Indirect access to and from the site is provided by Pleasanton-Sunol Road via Happy Valley Road.

Sycamore Road-Alisal Street-Happy Valley Road (Happy Valley Loop) is a two-lane continuous bending route that provides direct and indirect access to existing homes throughout the Plan area. The Loop connects directly with two larger roadways: Sunol Boulevard via Sycamore Road and Pleasanton-Sunol Road via Happy Valley Road. This route has no paved shoulders and no parking throughout its length.

- *Sycamore Road*, a segment of the Happy Valley Loop, is a 21-foot wide roadway providing access to the project site along its northern edge. It originates at Sunol Boulevard and terminates at Alisal Street. Sycamore Road and Alisal Street connect as an uncontrolled right-angle intersection with a private road as its third leg.
- *Alisal Street*, a second segment of the Happy Valley Loop, is a 20-foot wide roadway providing north-south access within the project site. It extends from Sycamore Road to Happy Valley Road, and includes two right-angle bends along its length. Alisal Street and Happy Valley Road connect as an uncontrolled T-intersection.
- *Happy Valley Road*, a third segment of the Happy Valley Loop, is a 19-foot wide winding roadway providing east-west access within the project site. It extends west of Alisal Street to Pleasanton-Sunol Road, with a substandard width of 14 feet at an existing railroad trestle undercrossing outside the Plan area, in unincorporated Alameda County. The intersection of Pleasanton-Sunol Road and Happy Valley Road currently operates with one-way STOP control on Happy Valley Road.

(b) Intersections Included in the Analysis. Intersections included in this analysis are shown in Figure 7 (p. 27) and listed below, with their identifying numbers from the City's traffic model:

<u>Number</u>	<u>Intersection Location</u>
1	Pleasanton-Sunol Road/Happy Valley Road
342	Sunol Boulevard/Bernal Avenue
352	I-680 Southbound Ramps/Bernal Avenue
353	Bernal Avenue/Valley Avenue
354	I-680 Northbound Ramps/Bernal Avenue
447	Sunol Boulevard/Sycamore Road
497	Sunol Boulevard/Junipero Street
970	I-680 Northbound Ramps/Sunol Boulevard
971	I-680 Southbound Ramps/Sunol Boulevard

(c) **Roadway Segments Included in the Analysis.** In addition to examining operating conditions at the intersections listed above, this analysis considers operations on the following roadway segments:

- Sycamore Road
- East/West Collector (future planned roadway)
- Alisal Street
- Happy Valley Road

(2) **Existing Intersection Levels of Service.** Existing conditions are based on the City of Pleasanton's annual baseline report² and turning movement volume counts conducted by TJKM at Sunol Boulevard/Sycamore Road and Sunol Boulevard/Junipero Street on April 23, 1997 and Pleasanton-Sunol Road/Happy Valley Road on May 28, 1997. Figure 7 (p. 27) illustrates the existing peak hour turning movement volumes at the study intersections.

The City of Pleasanton evaluates operating conditions at signalized intersections using a process known as the Intersection Capacity Utilization (ICU) method. The unsignalized study intersections were analyzed using the 1994 unsignalized intersection analysis methodology from the *Highway Capacity Manual* (HCM). A description of these methodologies is provided in *Appendix A to A Traffic Impact Study of the Proposed Happy Valley Specific Plan* (TJKM, June 26, 1997; hereinafter cited as "the transportation background report"), which is on file with the City of Pleasanton Planning Department. Peak hour intersection conditions, along with their corresponding level of service ratings, are reported as volume-to-capacity (V/C) ratios for signalized intersections and average delay per vehicle for unsignalized intersections. Level of service ratings are qualitative descriptions of intersection operations and are reported using an A through F letter rating system to describe travel delay and congestion. Level of Service A indicates free-flow conditions with little or no delay and LOS F indicating jammed conditions with excessive delays and long back-ups. A summary of level of service characteristics is provided in Table 7.

All existing study intersections currently operate at acceptable levels of service. The signalized study intersections operate at LOS D or better during both peak hours. The unsignalized study intersection of Pleasanton-Sunol Road/Happy Valley Road operates acceptably at LOS A for the delayed movements during both peak hour periods. Signalization of this intersection based on Caltrans' peak hour signal warrants is not required. Table 8 summarizes the existing intersection levels of service at the study intersections. The traffic background study contains detailed calculations for intersections not included in the City's standard database.

(3) **Existing Traffic on Roadway Segments.** The existing average daily traffic volumes are illustrated in Figure 10. Currently, daily volumes on all study roadways are below 3,000 VPD. Future daily traffic projected to be generated under all scenarios will be added to these base volumes.

² Annual Traffic Counts for Baseline 1996, City of Pleasanton, June 1996.

Table 7
Summary of Levels of Service for Signalized Intersections

Level of Service	Type of Flow	Delay	Maneuverability	V/C Ratio
A	Stable	Very slight or no delay. No approach phase is fully utilized by traffic, and no vehicle waits longer than one red light.	Turning movements are easily made, and nearly all drivers find freedom of operation.	0.00-0.60
B	Stable	Slight delay. An occasional approach phase is fully utilized.	Vehicle platoons are formed. Many drivers begin to feel somewhat restricted within groups of vehicles.	0.61-0.70
C	Stable	Acceptable delay. A few drivers arriving at the end of a queue may occasionally have to wait through one signal cycle.	Backups may develop behind turning vehicles. Most drivers feel somewhat restricted.	0.71-0.80
D	Approaching Unstable	Tolerable delay. Delays may be substantial during short periods, but excessive backups do not occur.	Maneuverability is severely limited during short periods due to temporary backups.	0.81-0.90
E	Unstable	Intolerable delay. Delays may be great – up to several signal cycles.	Long queues of vehicles waiting upstream of the intersection typically form.	0.91-1.00
F	Forced	Excessive delay.	Jammed conditions. Backups from other locations restrict or prevent movement. Volumes may vary widely, depending principally on the downstream backup conditions.	Varies*

* In general, V/C ratios cannot be greater than 1.00, unless the lane capacity assumptions are too low. Also, if future demand projections are considered for analytical purposes, a ratio greater than 1.00 might be obtained, indicating that the projected demand would exceed capacity.

Source: City of Pleasanton General Plan, Table III-2 (p. III-20)

Table 8
Peak Hour Intersection Levels of Service: Existing Conditions

No.	Intersection Location	Intersection Control	A.M.		P.M.	
			V/C*	LOS	V/C*	LOS
1	Pleasanton-Sunol Rd./Happy Valley Rd.	One-Way STOP	2.9	A	3.3	A
342	Sunol Blvd./Bernal Ave.	Signalized	0.61	B	0.61	B
352	I-680 SB Ramps/Bernal Ave.	Signalized**	0.64	B	0.51	A
353	Bernal Ave./Valley Ave.	Signalized	0.65	B	0.53	A
354	I-680 NB Ramps/Bernal Ave.	Signalized**	0.50	A	0.68	B
447	Sunol Blvd./Sycamore Rd.	Signalized**	0.76	C	0.85	D
497	Sunol Blvd./Junipero St.	Signalized	0.55	A	0.57	A
970	I-680 NB Ramps/Sunol Blvd.	Signalized**	0.53	A	0.81	D
971	I-680 SB Ramps/Sunol Blvd.	Signalized**	0.74	C	0.47	A

* Volume-to-capacity (V/C) ratio for signalized intersections, average delay in seconds/vehicle for the delayed movements at unsignalized intersections.

** Intersection is currently unsignalized but is planned for eventual signalization. To ensure a consistent comparison with future scenarios, signalization is assumed.

Source: TJKM Transportation Consultants

b. The Future Setting: Conditions with General Plan Buildout

The future setting assumes buildout of the City, including the Happy Valley Area, consistent with the City's current General Plan. More specifically, it assumes that land uses will be developed as shown in the General Plan, and that the roadway network contained in the General Plan will be completed. This scenario is the approved future base against which the proposed project is to be compared.

(1) Roadway Improvement Assumptions. The results of this study assume that key roadway improvements will be completed in the transportation study area over the course of the buildout of the City's General Plan. The location and nature of these improvements are:

- *Valley Avenue* extends south of Bernal Avenue, connecting with Sunol Boulevard via an extension of Junipero Street.
- The *East/West Collector* is constructed in the North Sycamore Specific Plan area. This new road would originate at Sunol Boulevard and traverse the North Sycamore Specific Plan area in an easterly direction, generally parallel to Sycamore Road. Sycamore Road would be realigned to terminate at a T intersection with the new roadway about 400 feet east of Sunol Boulevard. A new traffic signal would be installed at the intersection of Sunol Boulevard and the East-West Collector at the time the East-West Collector is constructed.
- All of the study intersections except of Happy Valley Road/Pleasanton-Sunol Road would be signalized under all study scenarios.

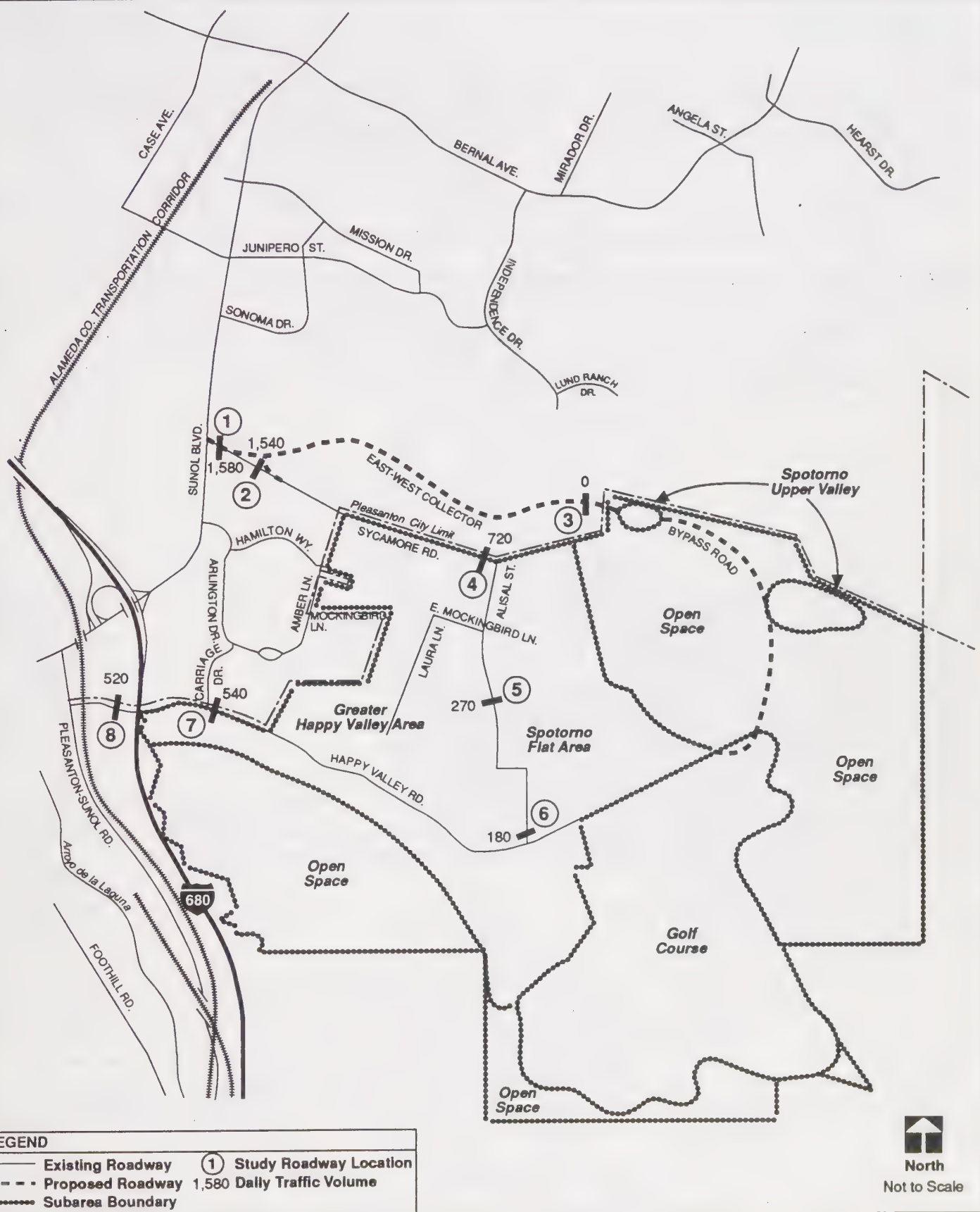


Figure 10

Existing Roadway Daily Traffic Volumes

Source: TJKM

(2) Intersection Levels of Service. The future volumes at the study intersections were analyzed by recalculating the volume-to-capacity ratios and corresponding level of service ratings for the a.m. and p.m. peak hours. The results of the analysis are summarized in Table 9.

Table 9
Peak Hour Intersection Levels of Service: General Plan Buildout Conditions

ID	Intersection Location	Peak Hour	Existing		Future Setting (General Plan Buildout)			
			V/C*	LOS	Without I-680/WLP interchange		With I-680/WLP interchange	
					V/C*	LOS	V/C*	LOS
1	Pleasanton-Sunol Rd./ Happy Valley Rd.(U)	A.M.	2.9	A	3.0	A	3.0	A
		P.M.	3.3	A	3.5	A	3.5	A
342	Sunol Blvd./ Bernal Ave.(S)	A.M.	0.61	B	0.89	D	0.88	D
		P.M.	0.61	B	0.87	D	0.87	D
352	I-680 SB Ramps/ Bernal Ave.(S)	A.M.	0.64	B	0.75	C	0.76	C
		P.M.	0.51	A	0.83	D	0.78	C
353	Valley Ave./ Bernal Ave.(S)	A.M.	0.65	B	0.81	D	0.61	B
		P.M.	0.53	A	0.86	D	0.66	B
354	I-680 NB Ramps/ Bernal Ave.(S)	A.M.	0.50	A	0.74	C	0.62	B
		P.M.	0.68	B	0.87	D	0.72	C
447	Sunol Blvd./ Sycamore Rd.(S)	A.M.	0.76	C	0.66	B	0.66	B
		P.M.	0.85	D	0.83	D	0.82	D
497	Sunol Blvd./ Junipero St.(S)	A.M.	0.55	A	0.81	D	0.80	C
		P.M.	0.57	A	0.82	D	0.81	D
970	I-680 NB Ramps/ Sunol Blvd.(S)	A.M.	0.53	A	0.68	B	0.67	B
		P.M.	0.81	D	0.59	A	0.59	A
971	I-680 SB Ramps/ Sunol Blvd.(S)	A.M.	0.74	C	0.64	B	0.65	B
		P.M.	0.47	A	0.71	C	0.72	C

* Volume-to-capacity (V/C) ratio for signalized intersections, average delay in seconds/vehicles for the delayed movements on unsignalized intersections.

(S) Signalized intersection

(U) STOP-controlled (unsignalized) intersection

Source: TJKM Transportation Consultants

All signalized study intersections are expected to operate acceptably at LOS D or better, both with and without the West Las Positas Interchange, assuming planned future lane patterns. The unsignalized intersection of Pleasanton-Sunol Road/Happy Valley Road will also continue to operate at acceptable levels of service (LOS A). Caltrans' peak hour signal warrants are not met. In general, levels of service improve slightly with the construction of the West Las Positas Interchange. Detailed level of service calculations are on file with the City of Pleasanton Planning Department.

Peak hour turning movement volumes at General Plan buildout are illustrated in Figures 11 and 12 without and with the construction of the planned I-680/West Las Positas Boulevard interchange, respectively.

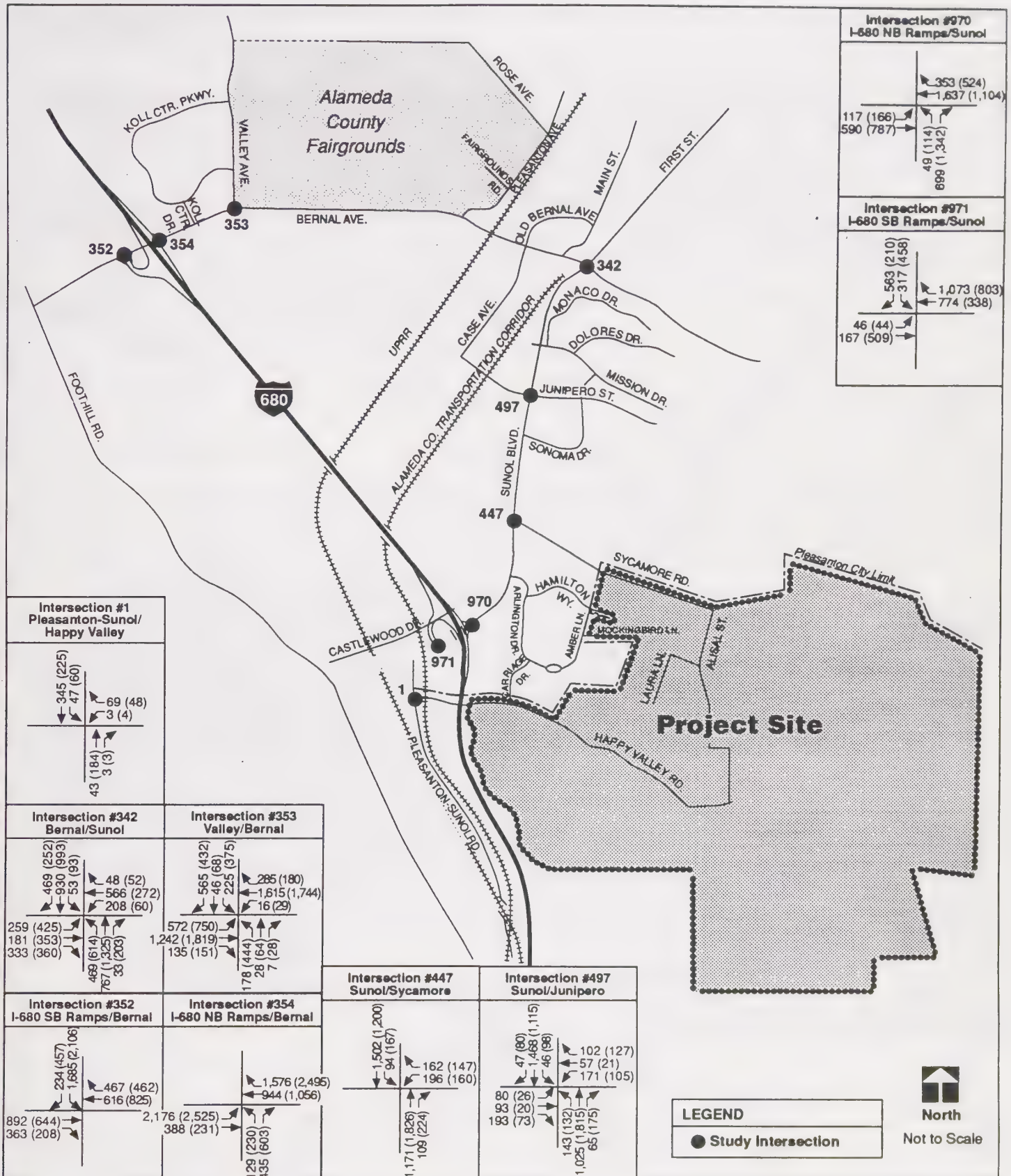


Figure 11
General Plan Buildout Peak Hour
Turning Movement Volumes
Without West Las Positas Interchange

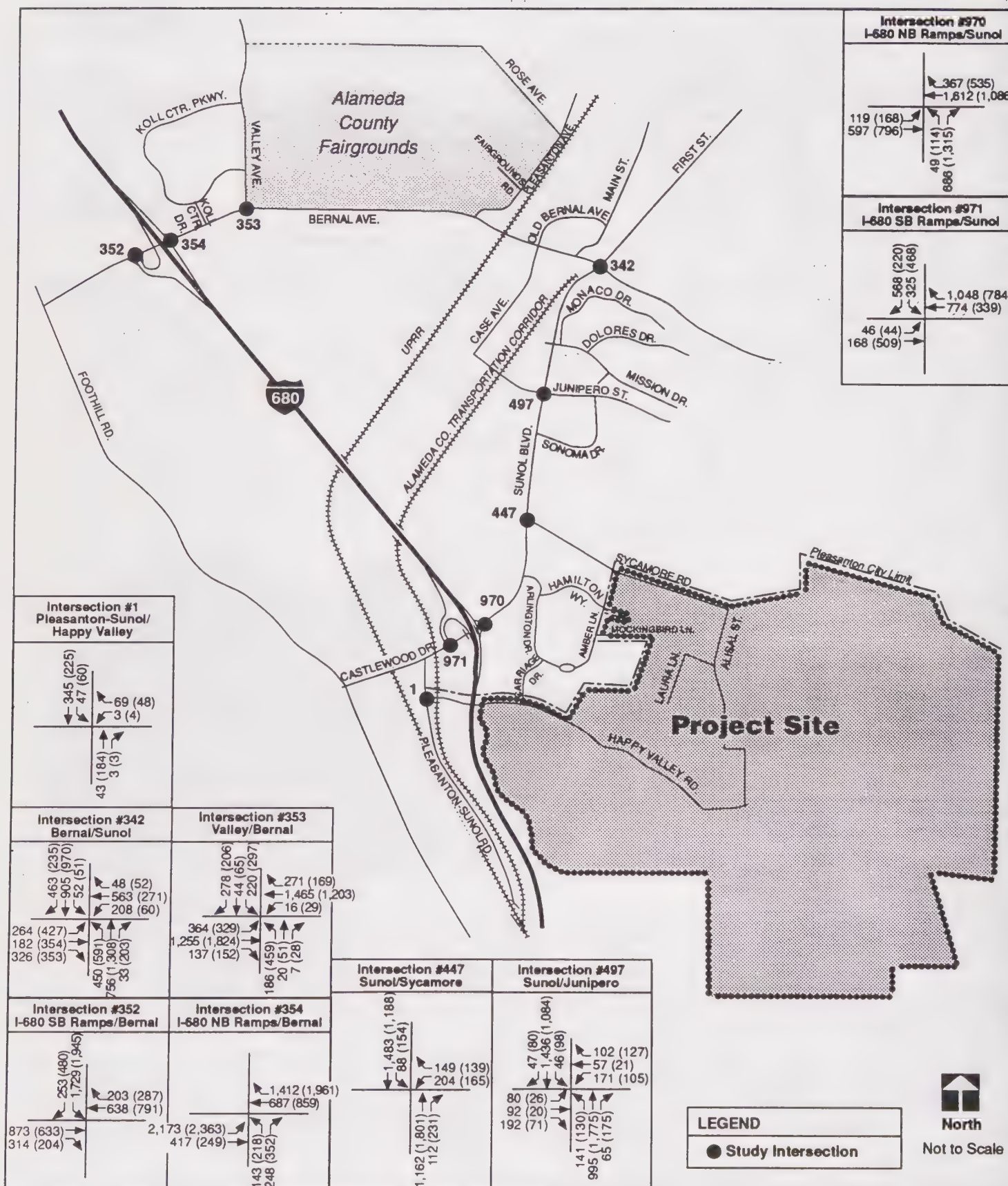


Figure 12
General Plan Buildout Peak Hour
Turning Movement Volumes
With West Las Positas Interchange

(3) Roadway Segments. Figure 13 illustrates the projected traffic volumes on the study roadway segments with General Plan buildout. Under these conditions, traffic from the Happy Valley buildout development (assuming the current General Plan land use designations) would result in a maximum daily traffic volume increase of 1,380 VPD on the East/West Collector, 560 VPD on Sycamore Road, 550 VPD on Alisal Street, and 860 on Happy Valley Road. The traffic volumes on the study roadways would not increase beyond 3,000 VPD except on the East/West Collector between Sunol Boulevard and its intersection with (realigned) Sycamore Road. These higher volumes are expected at this location because traffic using Sycamore Road must use this segment of the East/West Collector to gain access to the local roadway network. It should also be noted the North Sycamore Specific Plan has established a capacity threshold of 10,000 VPD on this segment of the East/West Collector.

3. Impacts

a. Significance Criteria

(1) Signalized Intersections. The City of Pleasanton has adopted Level of Service (LOS) D as the minimum acceptable level of service for all intersections outside of the Downtown area. Therefore, any intersection found to operate at LOS E or worse as a result of a proposed project will be considered impacted by the project. Intersections operating at these levels of service are characterized by congestion and excessive delay and must be considered for mitigation measures.

(2) Roadway Segments. The City of Pleasanton has established an “environmental capacity” threshold maximum of 2,000 to 3,000 vehicles per day (VPD) on residential streets in order to enhance safety and comfort for local residents along these streets. The lower end of this range is intended for more rural roads, and the higher end for urban/suburban roads. Any roadway segment found to have daily traffic volumes above this threshold as a result of a project will be considered impacted by the project.

b. Methodology

(1) Intersection Level of Service Analysis. Projected traffic from new development permitted by the Specific Plan (Tables 5 and 6, pp. 29 and 32) was added to the traffic projected at the respective study area intersections under General Plan buildout (Table 9, p. 38) to determine vehicle counts with the project, and resulting vehicle/capacity ratios, at each study area intersection.

(2) Roadway Segment Analysis. To evaluate the impact of the proposed project on existing residential streets within the project site, 48-hour traffic volume counts were conducted on May 28 and 29, 1997 at six locations along the study roadways. The counts for these two days were averaged to determine average daily traffic and establish base conditions against which the future scenarios are to be compared. Daily traffic volumes were evaluated at the following eight locations:

- Sycamore Road east of Sunol Boulevard
- Sycamore Road east of East/West Collector (future roadway)
- East/West Collector (future roadway) east end
- Sycamore Road west of Alisal Street

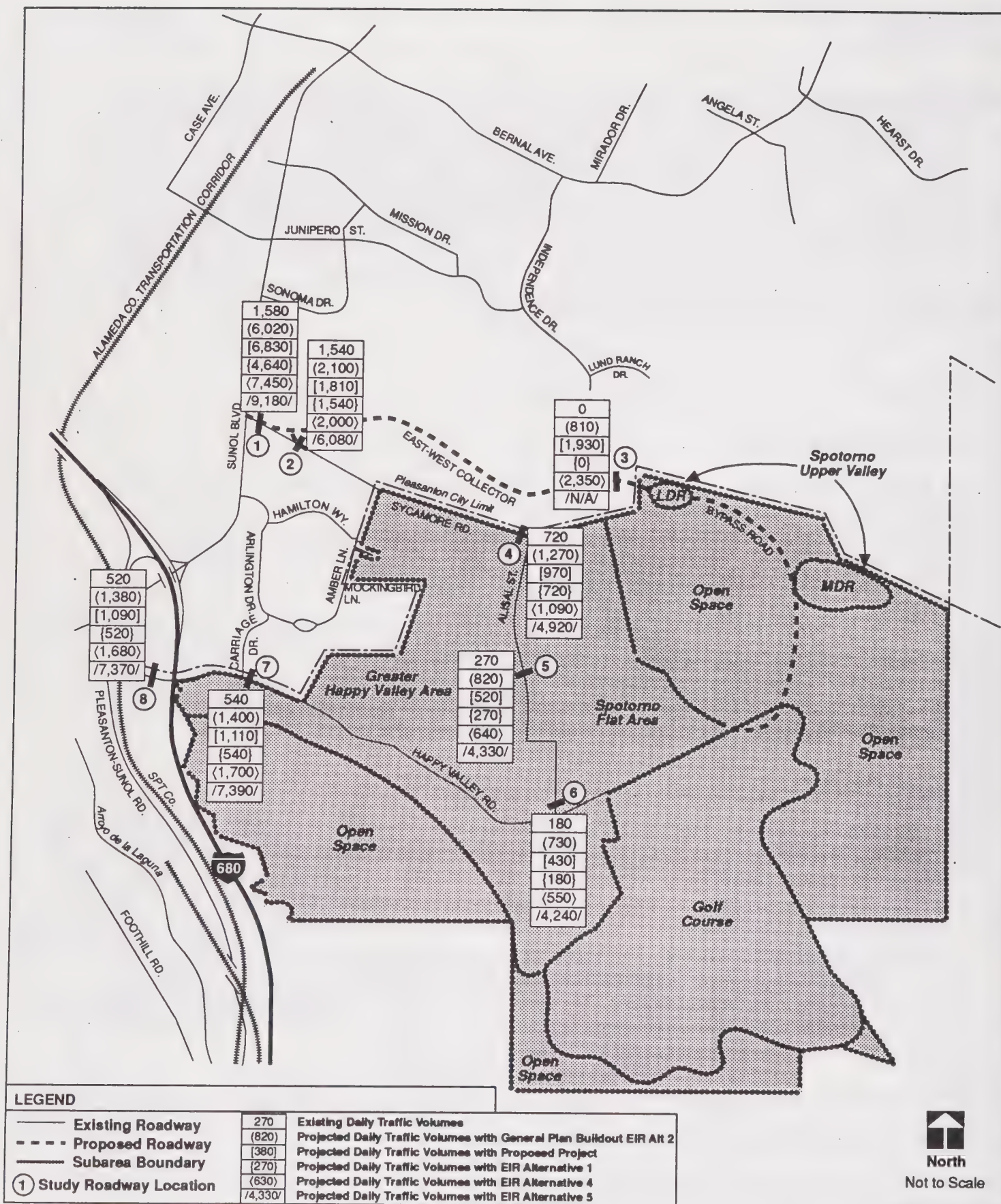


Figure 13

Future Study Roadway Daily Traffic Volumes at General Plan Buildout

- Alisal Street near its midpoint
- Alisal Street north of Happy Valley Road
- Happy Valley Road east of Carriage Drive
- Happy Valley Road east of Pleasanton-Sunol Road

c. Impacts

(1) Intersection Levels of Service. With the proposed project, intersection levels of service are nearly identical to those under the General Plan buildout scenario. All signalized study intersections will continue to operate acceptably. Figures 14 and 15 illustrate the peak hour turning movements for this scenario (General Plan buildout plus project) with and without the West Las Positas interchange. The remaining unsignalized intersection is expected to operate with acceptable levels of service without signalization.

Table 10 summarizes the results of the level of service analysis. Detailed calculations are contained in appendices to the traffic background report.

(2) Roadway Segment Traffic Impacts. Figure 13 (p. 42) illustrates projected volumes on nearby roadway segments for all study scenarios. As the figure shows, the project would result in a maximum daily traffic volume increase of 2,190 vehicles per day (VPD) on the East/West Collector (between Sunol Boulevard and Sycamore Road; Segment 1), 270 VPD on Sycamore Road (Segment 2), 250 VPD on Alisal Street (Segment 5), and 570 VPD on Happy Valley Road (Segment 7). The increases on Sycamore Road, Alisal Street, and Happy Valley Road are lower than those of the General Plan buildout scenario because the new Bypass Road removes the majority of future traffic from the Happy Valley Loop. As in the General Plan Buildout scenario, the future traffic volumes on the study roadways do not increase beyond 3,000 VPD except on the East/West Collector just east of Sunol Boulevard. It should be reiterated that this segment of the East/West Collector has a potential capacity threshold of 10,000 VPD as specified by the North Sycamore Specific Plan.

(3) “Cut-Through” Traffic. With planned improvements to Route 84 and the construction of the Route 84/I-580 interchange, future traffic that may “cut through” the City from I-580 and I-680 is not expected to have a significant impact on the study intersections and roadways under the City’s buildout conditions.

The Stanley Boulevard-First Street-Sunol Boulevard route is projected to be the primary cut-through corridor under the City’s five-year growth conditions (that is, through the year 2000). The Sunol Boulevard/Bernal Avenue intersection, in the transportation study area, is an important intersection along this route, but is nevertheless projected to operate acceptably with cut-through traffic with or without the West Las Positas Interchange.

In the longer term, under General Plan buildout conditions, it is assumed that the State Route 84/I-580 interchange is built, Route 84 is improved as a through route, and Stoneridge Drive-Jack London Boulevard is connected between Pleasanton and Livermore. With these improvements, cut-through traffic on the Stanley Boulevard-First Street-Sunol Boulevard route is expected to be minimal with or without the West Las Positas Interchange.

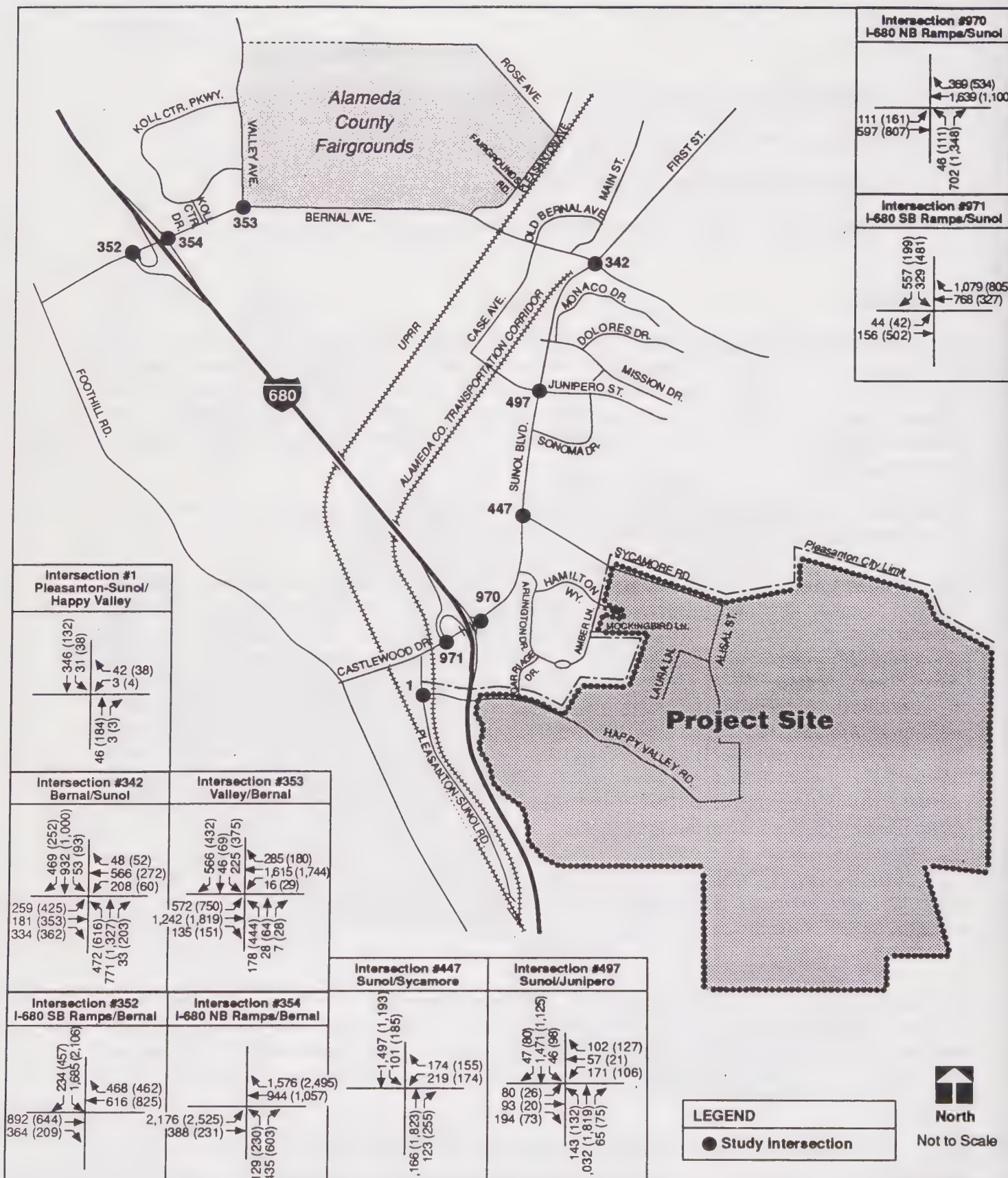


Figure 14

Proposed Project Peak Hour Turning Movement Volumes Without West Las Positas Interchange

Source: TJKM

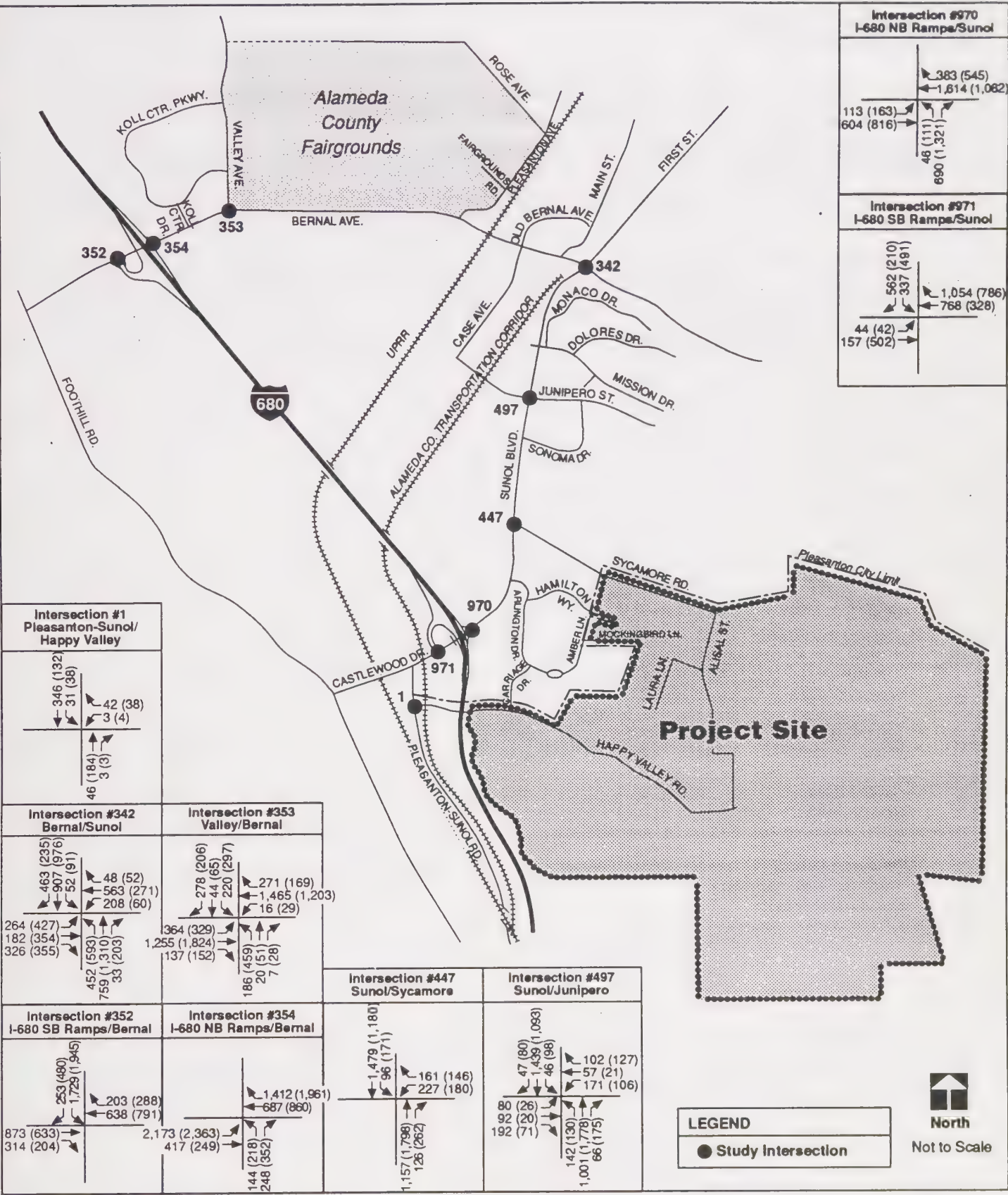


Figure 15

Proposed Project Peak Hour Turning Movement Volumes With West Las Positas Interchange

Source: TJKM

Table 10
Summary of Intersection Levels of Service

ID	Intersection Location	Peak Hour	Existing		Future Setting (General Plan Buildout)				Future Setting + Proposed Project			
					Without I-680/WLP interchange		With I-680/WLP interchange		Without I-680/WLP Interchange		With I-680/WLP Interchange	
			V/C*	LOS	V/C*	LOS	V/C*	LOS	V/C*	LOS	V/C*	LOS
1	Pleasanton-Sunol Rd./ Happy Valley Rd.(U)	A.M.	2.9	A	3.0	A	3.0	A	3.0	A	3.0	A
		P.M.	3.3	A	3.5	A	3.5	A	3.3	A	3.3	A
342	Sunol Blvd./ Bernal Ave.(S)	A.M.	0.61	B	0.89	D	0.88	D	0.89	D	0.88	D
		P.M.	0.61	B	0.87	D	0.87	D	0.88	D	0.87	D
352	I-680 SB Ramps/ Bernal Ave.(S)	A.M.	0.64	B	0.75	C	0.76	C	0.75	C	0.76	C
		P.M.	0.51	A	0.83	D	0.78	C	0.83	D	0.78	C
353	Valley Ave./ Bernal Ave.(S)	A.M.	0.65	B	0.81	D	0.61	B	0.81	D	0.61	B
		P.M.	0.53	A	0.86	D	0.66	B	0.86	D	0.66	B
354	I-680 NB Ramps/ Bernal Ave.(S)	A.M.	0.50	A	0.74	C	0.62	B	0.74	C	0.62	B
		P.M.	0.68	B	0.87	D	0.72	C	0.87	D	0.72	C
447	Sunol Blvd./ Sycamore Rd.(S)	A.M.	0.76	C	0.66	B	0.66	B	0.68	B	0.68	B
		P.M.	0.85	D	0.83	D	0.82	D	0.84	D	0.83	D
497	Sunol Blvd./ Junipero St.(S)	A.M.	0.55	A	0.81	D	0.80	C	0.81	D	0.80	C
		P.M.	0.57	A	0.82	D	0.81	D	0.83	D	0.81	D
970	I-680 NB Ramps/ Sunol Blvd.(S)	A.M.	0.53	A	0.68	B	0.67	B	0.67	B	0.66	B
		P.M.	0.81	D	0.59	A	0.59	A	0.58	A	0.58	A
971	I-680 SB Ramps/ Sunol Blvd.(S)	A.M.	0.74	C	0.64	B	0.65	B	0.64	B	0.64	B
		P.M.	0.47	A	0.71	C	0.72	C	0.72	C	0.73	C

* Volume-to-capacity (V/C) ratio for signalized intersections, average delay in seconds/vehicle for the delayed movements on unsignalized intersections.

(S) Signalized intersection

(U) STOP-controlled intersection

Source: TJKM Transportation Consultants

(4) Access/Safety. Additional traffic on the existing roads of Happy Valley, resulting from infill development on existing parcels, will increase the potential for accidents and safety hazards on those roads. In general, the roadways are narrow and rural in character, and are not designed to carry the traffic volumes that are reasonable in areas that have a more urban character. In particular, Happy Valley Road has a substandard pavement width at the existing railroad trestle undercrossing.

Roadway improvements and new traffic signs called for in the Specific Plan (see "Characteristics of the Project," above) will improve traffic safety and mitigate potential hazards resulting from increased traffic.

(5) Construction-period Traffic Disruptions. The Specific Plan limitations on construction hours and routes for construction vehicles are expected to minimize inconvenience to normal vehicular traffic, safety hazards associated with slow-moving vehicles and construction activity in the road rights-of-way, and poor visibility around oversized vehicles during the construction of the Golf Course and new residential areas as well as installation of new water and sewer infrastructure. As a result, impacts of construction activities would be less-than-significant.

4. Mitigation Measures

No mitigation measures are required.

C. NOISE

1. Characteristics of the Project

Noise would be generated in Happy Valley as a result of development permitted by the Specific Plan.

Requirements of the Plan that are intended to address potential noise impacts, include:

- **Traffic on Happy Valley Road.** The amount of traffic associated with the Specific Plan is discussed in Part B of this chapter (pp. 43 through 47). Because traffic noise impacts of the completed project are not expected to be significant in the Specific Plan Area, reduction of noise levels is not a major site planning objective of the Specific Plan.
- **Water and sewer pump stations.** The tentative locations of sewer and water pump stations are indicated in Figures 17 and 18 (pp. 63 and 72, respectively). City standards require that all pump stations be enclosed. The Specific Plan requires that any pump station in the Happy Valley be situated and designed so that pump noise level will not exceed 50 dBA at the property line or boundary of the easement of the pump site.
- **Golf carts and other equipment associated with golf course operations.** The Specific Plan prohibits the use of gasoline-powered golf carts. No adverse noise impacts are expected as a result of other equipment that is likely to be used for course maintenance.
- **Golf clubhouse public address system.** The Specific Plan requires that if the Golf Course clubhouse has a public address system (e.g., for calling golf parties to the first tee), then the system must have volume control and must be operated at a volume that is not audible at the nearest residence.
- **Construction activity.** The Specific Plan limits construction activity to the hours of 8:00 AM to 5:00 PM, Monday through Saturday.

2. Setting

The Specific Plan Area is bordered by open space to the east and the south, suburban subdivisions to the west, and future suburban residential development to the north.

Noise measurements were conducted to quantify existing noise levels at three locations that abut the Specific Plan Area. These locations are shown on Figure 16. Noise measurements at Locations 1 and 2 were taken over a continuous 24-hour period. The noise measurement at Location 3 was done in the afternoon for a 20-minute period.³

³ Twenty-minute measurements are typically used to establish the baseline ambient noise level in areas that are relatively quiet. Standard techniques are used to extrapolate the 24-hour noise level from the data gathered during the 20-minute measurement.

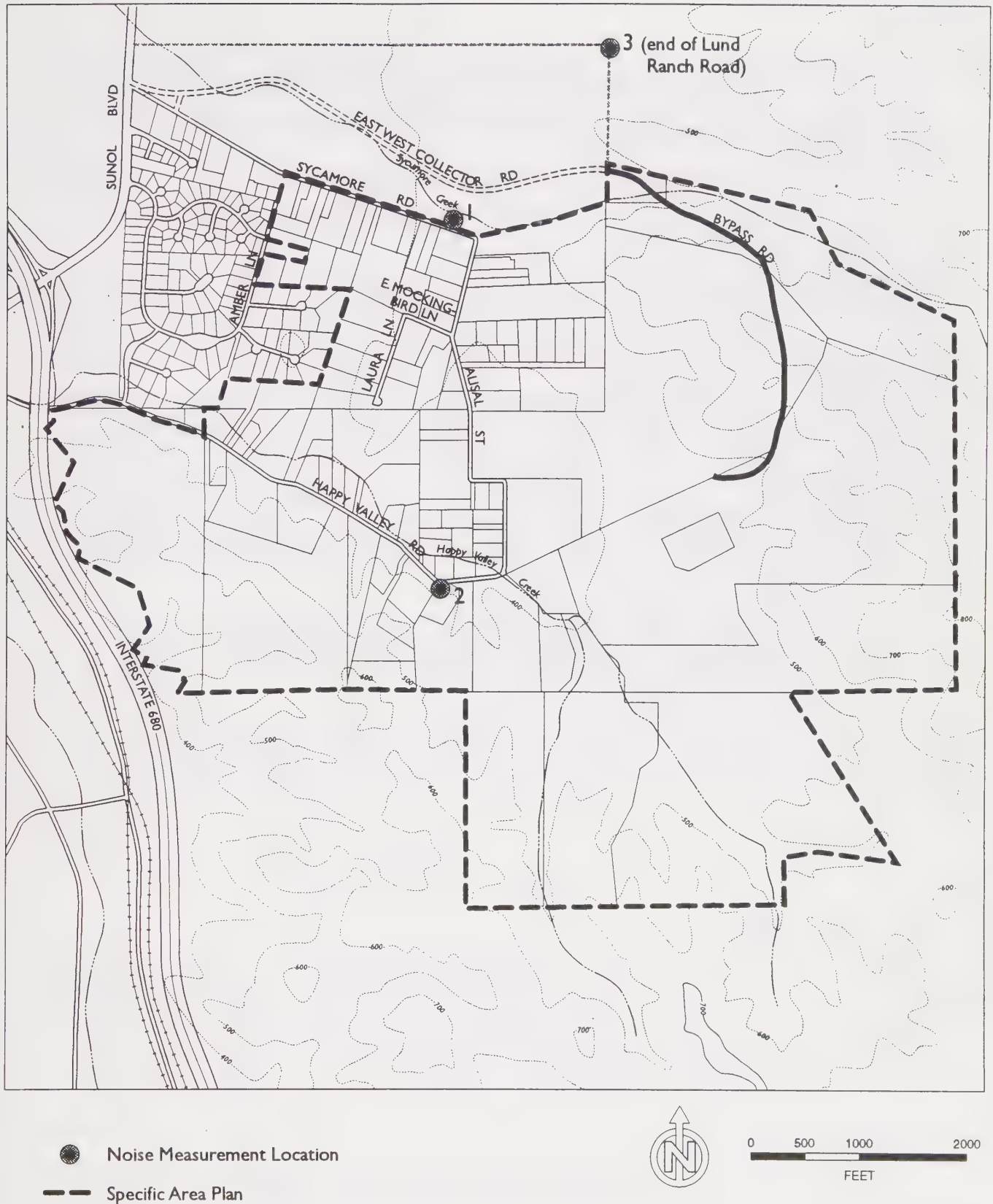


Figure 16

Source: Illingworth & Rodkin, Inc.

Noise Measurement Locations

- **Noise Measurement Location 1.** This measuring site is located along Sycamore Road just west of Alisal Street, near Lot 20. The major noise source is traffic on Sycamore Road; the background noise level is dominated by distant traffic on I-680 at a level of 40-45 dBA during the daytime and 35-40 dBA at night.

The noise measurement was made at a distance of 69 feet from the center of the road, typical of residential setbacks in this area. The day/night average noise level (L_{dn})⁴ measured from June 4 to June 5, 1997 was 55 dBA.⁵

- **Noise Measurement Location 2.** This measuring site is located along Happy Valley Road just west of Alisal Street, at Lot 112. At this location, too, the major noise source is traffic but this site appears to be better shielded than Location 1 from I-680 noise. Background noise levels were typically 35-45 dBA during the daytime and 30-35 dBA during the night.

This noise measurement was made at a distance of 50 feet from the center of Happy Valley Road, slightly closer to the road than the typical building setback but representative of the noise environment in this area. The L_{dn} at this location was measured to be 51 dBA. The L_{dn} at this location was 51 dBA.

- **Noise Measurement Location 3.** This measuring site is located at the end of Lund Ranch Road. The major noise sources are birds, some activity on neighborhood streets, and an occasional aircraft overflight.

This noise measurement was made at a point representative of noise levels outside of the homes that would be closest to the proposed East/West Collector. During the afternoon between 1:10 and 1:30 PM, the background noise level was 36 dBA and the average noise level was 43 dBA. The L_{dn} at this location is estimated to be about 50 dBA.

The Noise Element of the City of Pleasanton's General Plan recommends that outdoor noise levels in residential areas not exceed an L_{dn} of 60 dBA. An L_{dn} of 50-55 dBA would be considered quiet. By this standard, the Happy Valley area is quiet.

3. Impacts

a. Significance Criteria

Substantial increases in the ambient noise level or conflicts with existing City goals and policies are considered significant effects under CEQA. The General Plan defines "normally acceptable," "conditionally acceptable," and "unacceptable" noise conditions for different land uses, as shown in Table 11. This EIR uses the noise and land compatibility guidelines defined in Table 11 to evaluate whether the project conforms to City of Pleasanton standards.

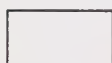
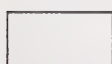

⁴ L_{dn} is a 24-hour noise measurement that accounts for human sensitivity to nighttime noise levels by assigning a higher weight to nighttime noise. See Appendix B for a discussion of the fundamentals of acoustics, including noise measurement terms used in this section.

⁵ dBA = decibels, as measured on an A-weighted scale. See Appendix B for a discussion of noise measurement terms used in this section.

Table 11
Land Use Compatibility for Community Noise Environment

LAND USE CATEGORY	EXTERIOR NOISE EXPOSURE L _{dn} OR CNEL, dB*					
	55	60	65	70	75	80
Residential, Hotels, and Motels						
Outdoor Sports and Recreation, Neighborhood Parks, and Playgrounds						
Schools, Libraries, Museums, Hospitals, Personal Care, Meeting Halls, and Churches						
Office Buildings, Business Commercial, and Professional						
Auditoriums, Concert Halls, and Amphitheaters						
Industrial, Manufacturing, Utilities, and Agriculture						

* L_{dn} (day/night average sound level) is a noise level descriptor that was developed to account for human sensitivity to nighttime noise levels. The Community Noise Equivalent Level (CNEL) is a 24-hour average which includes both an evening and nighttime weighting. See Appendix B for additional discussion of these measures.

-  **Normally acceptable:** Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal convention construction, without any special insulation requirements.
-  **Conditionally acceptable:** Specified land use may be permitted only after detailed analysis of the noise reduction requirements and needed noise insulation features included in the design.
-  **Unacceptable:** New construction or development should generally not be undertaken because mitigation is usually not feasible to comply with noise element policies.

Source: City of Pleasanton General Plan, Table VIII-3

The following considerations should be taken into account when using the Noise and Land Use Compatibility Guidelines for the land uses included in the Happy Valley Specific Plan:

- The goal for maximum noise levels in residential areas is L_{dn} of no more than 60 dB. This level is a requirement to guide the design and location of future development and a goal for the reduction of noise in existing development.
- The goal for maximum noise levels in recreational areas is L_{dn} of no more than 65 dB.

As indicated in the "Setting" section, above, existing noise levels in the Happy Valley Specific Plan Area are well within these standards.

Two criteria are applied in this analysis to identify significant adverse noise impacts:

- The exposure of new or existing residents to noise levels that the General Plan characterizes as incompatible with residential development (“conditionally acceptable” or “unacceptable”) would be considered a significant impact.
- An increase in the day/night average noise level of 3 dBA or more (through introduction of new projects or activities, including traffic) would be considered a significant impact.

b. Impacts of the Proposed Project

(1) Noise Levels in Proposed Residential and Recreational Areas. The residential portions of the site and the Golf Course areas would be located where the noise level is, in all cases, less than 60 dBA. This noise level is compatible with these uses.

(2) Noise Level Increases Along Roadways. With traffic associated with buildout of the Specific Plan, noise levels along all the streets in the area, including the proposed Bypass Road, would be less than 60 L_{dn} at a distance of 50 feet from the center of the road. Under these conditions, even front yards of homes fronting on these streets would have a noise exposure of 60 L_{dn} , at the most. Rear yards of these homes and outdoor noise levels at homes located greater than 50 feet from these streets would be well below and L_{dn} of 60 dB.

(a) Noise Levels along the Bypass Road. With buildout of the Specific Plan, traffic on the proposed Bypass Road would generate an L_{dn} of about 56 dBA at a distance of 100 feet from the road. The noise level would reduce to an L_{dn} of about 52 dBA at a distance of 200 feet and 48 dBA at a distance of 400 feet from the road. Typically, existing residences in the vicinity of that roadway are over 400 feet from the road and the noise generated by the roadway would be at or below the existing background noise level in the area. Noise generated by individual vehicles could be occasionally audible outside of existing residences to the north and the south but would not noticeably increase the average noise level in the area.

The EIR on the North Sycamore Specific Plan (NSSP) addresses the potential impacts of traffic associated with potential new development in the Happy Valley area along the East/West Collector on new homes in that planning area. Because those impacts are addressed in the NSSP EIR, they are not addressed by this EIR.

(b) Noise Levels along Roads within Happy Valley. Noise levels along Happy Valley Road, Alisal Street, and Sycamore Road would increase by less than 3 dBA under the proposed project. Such an increase would not be considered a significant impact, and the L_{dn} in the existing area would remain in the range of 50-55 dBA at typical residential setbacks. Noise levels along the proposed Bypass Road would be an L_{dn} of about 55 dBA at a distance of 100 feet from the center of the road.

(3) Noise Associated with Pump Stations. The Specific Plan calls for the placement of two pump stations within the Study Area: one for water and one for wastewater. While pump stations are not significant noise generators, they can generate adverse community response if they are located close to residential development or other noise sensitive uses.

Potential pump station locations are shown in Figures 17 and 18 (pp. 62 and 73). The water pump station would not be located adjacent to any existing residential development. Since the pump is to be placed in an enclosure, the noise will not be audible at any existing or planned residences.

The proposed sewer pump station, on Alisal Street, has the potential to affect residences if the residences are located very close to it. The Specific Plan (Sections VII.A.3 and VII.B.2) requires that pump stations be situated and designed so that the noise level generated by the pump does not exceed 50 dBA at the property line or boundary of the easement on the land on which it is located. It is relatively straightforward to achieve this standard in the form of absorption inside the enclosure and the use of acoustical louvers and/or sound attenuators, if necessary. This requirement would result in noise levels which would not generally be detectable during the daytime, or indoors during the nighttime even with windows open.

(4) Noise Associated with Electric vs. Gasoline-powered Golf Carts. Gas-powered golf carts are noisier than electric carts. Noise generated by gas-powered carts would not be expected to increase the L_{dn} at any existing residence by more than 3 dBA. If the cart paths are located adjacent to existing residences, cart noise would still not increase the noise level by more than 3 dBA; it would, however, be clearly noticeable and may be annoying to residents. This impact is not considered significant based on the criteria described above; nevertheless, to avoid potential annoyances, the Specific Plan (Chapter __, Section 5.d) prohibits the use of gasoline-powered carts.

(5) Noise Associated with Other Golf Course Operations. In addition to golf carts, operation and maintenance of the Golf Course is expected to require the use of fuel-powered lawnmowers and other vehicles that are used for to aerate and fertilize the soil and to work on the irrigation system. Clubhouse and clubhouse-related operations will generate noise associated with parking and, possibly, with a public address system that is typically used to call golf parties to the first tee at the appropriate time.

Noise from the operation of maintenance equipment has not been identified as a noise issue in other golf course locations, and is not expected to have an adverse impact on existing residences in Happy Valley. Clubhouse-related activities are not expected to have adverse impacts because the clubhouse site is located at a considerable distance from existing and planned homes. The Specific Plan requires that the public address system at the clubhouse be designed with volume control and operated at a volume ensuring that announcements will not audible at the nearest residence.

(6) Noise Associated with Construction Activity. Construction activity would be audible at existing residences. However, due to the generally large distances between existing homes and the majority of the construction of the Specific Plan Area, construction noise levels, while audible, would be less than 60 dBA and would therefore not be considered to be significant.

The Specific Plan (Land Use, Section 8a) limits construction activity of “Golf Course, housing, road, infrastructure, and other site improvements” to the hours of 8:00 AM to 5:00 PM, Monday through Saturday.

4. Mitigation Measures

No mitigation is required.

D. AIR QUALITY

1. Characteristics of the Project

The Specific Plan provides for construction of a new road link (the Bypass Road) that would provide access to Subareas a, b, c, and e. This road would reduce the level of traffic, and the associated impacts on air quality, that would otherwise gain access to Sunol Boulevard via Happy Valley Road, Alisal Street, and Sycamore Road.

Development permitted by the Specific Plan would result in dust and other particulates during site preparation and construction activities. The Specific Plan includes a dust control plan for the construction period in order to avoid adverse impact on air quality. The following basic control measures are included:

- During the construction period, all active unpaved construction areas (residential, Golf Course, roads, and infrastructure) shall be watered as needed, or treated with soil stabilizers, in order to avoid dust, and exposed stockpiles of dirt or sand shall be enclosed, covered, or treated with dust-preventives.
- If soil material is carried over public or private roads, those roads shall be swept daily with water sweepers to control dust.
- In graded construction areas, replacement vegetation shall be planted as quickly as possible. Graded areas that remain inactive for ten days or more during the rainy season (October 1 to April 1) without permanent replanting should be hydroseeded or stabilized to inhibit dust.
- Excavation and grading shall be suspended when winds (instantaneous gusts) exceed 25 miles per hour.

2. Setting

a. Air Basin Characteristics

The Livermore-Amador Valley, surrounded on all sides by high hills or mountains, forms a small sub-regional air basin distinct from the larger Bay Area Air Basin. Significant breaks in the hills surrounding the valley and its air basin are Niles Canyon, which extends westward toward San Francisco Bay from the southerly portion of the basin, and the San Ramon Valley, which extends northward into Contra Costa County.

The terrain of the Livermore-Amador Valley influences both the climate and air pollution potential of the subregional air basin. As an inland, protected valley, the area has generally lighter winds and a higher frequency of calm conditions than the greater Bay Area.

The occurrence of episodes of high atmospheric stability, known as inversion conditions, severely limits the ability of the atmosphere to disperse pollutants vertically. Inversions can be found during all seasons in the Bay Area, but are particularly prevalent in the summer months when they are present about 90 percent of the time in both morning and afternoon.

The Livermore-Amador subregional air basin is generally downwind of the greater Bay Area, and therefore is subject to pollutants transported to the area by prevailing winds.

The terrain, meteorological characteristics and downwind location of the Livermore-Amador subregional air basin give it a high potential for air pollution, particularly for photochemical pollutants (ozone)

b. Pollutant Characteristics and Air Quality Standards

Both the U. S. Environmental Protection Agency and the California Air Resources Board have established ambient air quality standards for common pollutants. These standards identify levels of each pollutant that are considered to be safe and to avoid specific adverse health effects. The ambient air quality standards address what are called “criteria” pollutants. Table 12 identifies these criteria pollutants, their characteristics, health effects and typical sources.

The federal and state ambient air quality standards, which are summarized in Table 13, differ in some cases. In general, the state standards are more stringent. This is particularly true for ozone and particulate matter (PM-10).

The U.S. Environmental Protection Agency has recently promulgated new federal standards for ozone and particulate matter. These new standards would be phased in over a period of several years. The current 1-hour ozone standard is to be replaced by a new, lower 8-hour standard in the year 2001. The current 24-hour and annual standards for particulate matter less than 10 microns in diameter (PM-10) would be augmented by 24-hour and annual standards for particulate matter less than 2.5 microns in diameter (PM_{2.5}). Implementation of the additional PM standards has not yet been scheduled.

c. Attainment Status

The federal Clean Air Act and the California Clean Air Act of 1988 require that the State Air Resources Board, based on air quality monitoring data, designate air basins within the state where the federal or state ambient air quality standards are not met as “nonattainment areas.” Because of the differences between the federal and state standards, the designation of nonattainment areas is different under the federal and state legislation. The San Francisco Bay Air Basin was recently redesignated by the U.S. Environmental Protection Agency as a “maintenance area” for ozone. “Maintenance Area” status requires long-term planning to maintain the ambient air quality standards. The “Urbanized Area” of the air basin is still considered “nonattainment” for carbon monoxide (however, a request for redesignation to “maintenance area” has been submitted jointly by the BAAQMD, Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC) to the U. S. Environmental Protection Agency). For all other national ambient air quality standards, the San Francisco Bay air basin is designated an attainment area or is unclassified.

The recent revisions to the national ambient standards for ozone and particulate matter have no immediate effect on nonattainment planning. Existing ozone and particulate matter designations will remain in effect until EPA establishes new designations based on any new ozone or particulate matter standard. Final promulgation of guidance for development of nonattainment plans for any new ozone or particulate matter standard is scheduled for June, 1999.

Under the California Clean Air Act the entire San Francisco Bay Air Basin is a nonattainment area for ozone and PM-10. The air basin is either attainment or unclassified for other pollutants based on state air quality standards.

Table 12
Major Criteria Pollutants

Pollutant	Characteristics	Health Effects	Major Sources
Ozone	A highly reactive photo-chemical pollutant created by the action of sunshine on ozone precursors (primarily reactive hydrocarbons and oxides of nitrogen). Often called photo-chemical smog.	<ul style="list-style-type: none"> • Eye irritation • Respiratory function impairment. 	Combustion sources, such as factories and automobiles, and evaporation of solvents and fuels.
Carbon Monoxide	An odorless, colorless gas that is highly toxic. It is formed by the incomplete combustion of fuels.	<ul style="list-style-type: none"> • Impairment of oxygen transport in the bloodstream. • Aggravation of cardiovascular disease. • Fatigue, headache, confusion, dizziness. • Can be fatal in the case of very high concentrations. 	Automobile exhaust, combustion of fuels, combustion of wood in wood stoves and fireplaces.
Nitrogen Dioxide	Reddish-brown gas that discolors the air, formed during combustion.	<ul style="list-style-type: none"> • Increased risk of acute and chronic respiratory disease. 	Automobile and diesel truck exhaust, industrial processes, fossil-fueled power plants.
Sulfur Dioxide	A colorless gas with a pungent, irritating odor.	<ul style="list-style-type: none"> • Aggravation of chronic obstruction lung disease. • Increased risk of acute and chronic respiratory disease. 	Diesel vehicle exhaust, oil-powered power plants, industrial processes.
PM-10	Solid and liquid particles of dust, soot, aerosols and other matter which are small enough to remain suspended in the air for a long period of time.	<ul style="list-style-type: none"> • Aggravation of chronic disease and heart/lung disease symptoms. 	Combustion, automobiles, field burning, factories and unpaved roads. Also a result of photochemical processes.

Source: Donald M. Ballanti, Consulting Meteorologist

Table 13
Federal and State Ambient Air Quality Standards*

Pollutant	Averaging Time	Federal Primary Standard	State Standard
Ozone	1-hour	0.12 ppm	0.09 ppm
Carbon monoxide	8-hour	9.0 ppm	9.0 ppm
	1-hour	35.0 ppm	20.0 ppm
Nitrogen dioxide	annual	0.05 ppm	--
	1-hour	--	0.25 ppm
Sulfur dioxide	annual	0.03 ppm	--
	24-hour	0.14 ppm	0.05 ppm
	1-hour	--	0.5 ppm
PM-10	annual	50 $\mu\text{g}/\text{m}^3$	30 $\mu\text{g}/\text{m}^3$
	24-hour	150 $\mu\text{g}/\text{m}^3$	50 $\mu\text{g}/\text{m}^3$
Lead	30-day avg.	--	1.5 $\mu\text{g}/\text{m}^3$
	month avg.	1.5 $\mu\text{g}/\text{m}^3$	--

* Standards currently in effect. New standards for ozone (8-hour) and PM_{2.5} (24-hour and annual) are to be phased in over a period of years; see text below.

ppm = parts per million

$\mu\text{g}/\text{m}^3$ = micrograms per cubic meter

Source: California ARB, *California Air Quality Data, Annual Summary*, Vol. XXV, 1994

d. Current Air Quality

The Bay Area Air Quality Management District operates a network of air monitoring sites within the Bay Area. The closest BAAQMD air monitoring site to the project site is located in Livermore. Table 14 shows a summary of air quality data for this monitoring site for the period 1991-1996. The number of days exceeding the standards for ozone, carbon monoxide, nitrogen dioxide, and PM-10 is shown for each year.

No federal standards have been violated in Livermore except the federal ozone standard. Despite violations recorded in 1993-1995, the region is still considered a maintenance area, rather than a nonattainment area, for this pollutant. The state standards, except those for ozone and PM-10, are generally met.

Table 14
Air Quality Data for Livermore, 1991-1996

Pollutant	Standard	Days Exceeding Standard In:					
		1991	1992	1993	1994	1995	1996
Ozone	Federal 1-Hour	1	0	1	2	7	8
	State 1-Hour	17	14	7	5	20	22
Carbon Monoxide	Federal/State 8-Hour	0	0	0	0	0	0
Nitrogen Dioxide	State 1-Hour	0	0	0	0	0	0
PM-10	Federal 24-Hour	1	0	0	0	0	0
	State 24-Hour	12	5	3	4	1	1

Source: *Air Currents*, Bay Area Air Quality Management District, April 1997

3. Impacts

a. Significance Criteria

Impacts on air quality would be considered significant if the Specific Plan would result in:

- Violation of any ambient air quality standard or substantial contribution to an existing or projected air quality violation;
- Exceedance of the future Pleasanton population levels assumed in regional air quality planning (the *Bay Area '94 Clean Air Plan*); or
- Exposure of sensitive receptors to substantial air pollution concentrations.

b. Impacts

Development of the Happy Valley area was considered as part of the South Pleasanton subarea in the City's 1996 General Plan Update, and air quality impacts of that development are therefore addressed in the EIR on the General Plan.

(1) Potential Violation of Air Quality Standards During Operations Period. Air quality effects of projects take the form of direct or indirect emissions of gases or particulates. Emissions standards are implemented by the Bay Area Air Quality Management District (BAAQMD) consistent with state and federal law. Impact standards have been set for carbon monoxide (which is a localized consequence of congestion), for reactive organic gases and nitrogen oxides (which are primarily a consequence of total regional vehicular emissions), and for particulates.

The project would not have an adverse effect on carbon monoxide levels because congestion in Pleasanton does not reach levels that trigger excessive concentrations, nor are such concentrations forecast for the future.

The reference standard for regional emissions and for particulates is the same, 80 pounds per day. The project is not of a scale at which those thresholds would be exceeded.

(2) Impacts Relating to Regional Growth. The Happy Valley Specific Plan is anticipated by the Pleasanton General Plan (within the South Pleasanton subarea described in the 1996 General Plan Update) and the regional air quality plan. The Specific Plan would permit development of 41 more housing units than anticipated in the General Plan. This increase is not considered significant in the context of Citywide and Tri-Valley growth. Therefore, no significant impact would occur.

(3) Construction Impacts. Air quality during construction could be adversely affected on a temporary basis due to dust and other particulates emitted during the course of grading and construction. The Specific Plan incorporates a dust control plan for the construction period as described above, in “Characteristics of the Project.” With the implementation of the dust control measures identified, construction impacts on air quality would be reduced to a less-than-significant level.

4. Mitigation Measures

Potential impacts related to air quality are mitigated to less-than-significant levels by (1) the size of the project, which would not cause exceedances of standards for specific pollutants or exceedance of the population level assumed for regional air quality planning and (2) requirements included in the Specific Plan to minimize construction-related dust. No mitigation is required.

E. INFRASTRUCTURE SYSTEMS: WATER

1. Characteristics of the Project

a. Water Demand

(1) Estimates of Standard Water Demand. Development permitted by the proposed Specific Plan would use an estimated 197 million gallons, or about 606 acre-feet, of water per year if all of the potential development occurs and all of the existing homes connect to the City water supply. The Golf Course would use about 132 million gallons (405 acre-feet) and the single family homes would use about 65 million gallons (201 acre-feet). Projected annual water use is detailed in Table 15. Peak day water use, which is estimated at 1.5 million gallons, is calculated in Table 16.

Table 15
Annual Water Use: Standard Estimate

Use	# Units	Gallons per Unit Per Year	Total Gallons Per Year	Acre-Feet Per Year
Golf course: 18 holes	1.0	132,000,000	132,000,000	405
Single Family Homes	290	225,570	65,415,300	201
Total			197,415,300	606

Source: City of Pleasanton, based on memorandum from JMP Golf Design Group ("Pleasanton Golf Course, 1016-98"), and 1996 Growth Management Report Update, Table V.d-4 (gallons per person per day). Assumes 3.09 persons per single family household.

Table 16
Peak Day Water Use: Standard Estimate

Use	Total Gallons Per Year	Average Gallons Per Day ¹	Gallons Per Peak Day ²
Golf course: 18 holes	100,000,000	333,333	1,000,000
Single Family Homes	65,640,870	179,838	539,514
Total	165,640,870		1,539,514

¹ Golf course calculation assumes 300 days of watering per year.

² Golf course peak is based on independent assessment; residential is three times average.

Source: "Proposed City of Pleasanton Municipal Golf Course" (document supplied by City); Mundie & Associates

(2) Estimates of Mitigated Water Demand. The Specific Plan (Section VII.B.2) requires that the following water conservation measures be implemented as development occurs:

- Water conservation devices and drought-tolerant landscaping should be installed, and water reclamation measures should be taken to the fullest extent feasible.
- The Golf Course should be designed so as to minimize potable water use; e.g., by specifying the use of turf species and other materials that are relatively less demanding of water.
- Plant materials that can tolerate the total dissolved solids (TDS) and other water quality characteristics of recycled water that could become available to the project should be chosen for the non-tees and -greens areas of the Golf Course. Tees and greens, which require better-quality (less salty) water, should use potable water to maintain plant health and attractiveness. (Use of recycled water blended with groundwater may be an acceptable alternative to potable water for tees and greens.)
- When technically and economically feasible, recycled water should be used for irrigation of the Golf Course (except the tees and greens) and other public spaces, in accordance with Regional Board Order No. 93-159, if consistent with the recommendations that emerge from the salt management plan. The irrigation transmission pipeline and irrigation system should be constructed completely separate from the potable water system, and these facilities should be marked to make the non-potable nature of the system obvious.

Water conservation measures in single family homes (including use of drought-tolerant landscaping) are estimated to reduce water consumption by as much as 10 percent.⁶ If 100 percent of new homes (but none of the existing homes) achieve this reduction, then projected residential water use would amount to about 62 million gallons (189 acre-feet) per year, and 0.51 million gallons on a peak day. With the Golf Course, the Specific Plan area's demand would total 194 million gallons (594 acre-feet) per year, and 1.5 million gallons (4.6 acre-feet) on the peak day. These estimates, which are calculated in Tables 17 and 18, represent estimated reductions of 10 percent in water use by new residential development, 6 percent in all residential development (assuming no reductions by existing homes), and 2 percent for the entire planning area (assuming no reductions on the golf course).

While the Golf Course could be designed to comply with the requirements included in the Specific Plan and outlined above, these conditions are considered difficult to achieve and are not assumed in this EIR. Of the three conditions that apply to the Golf Course, only planting with relatively less-demanding turf species could be achieved immediately. Such species could compromise the ability of the Course to endure the projected level of play, and therefore are not assumed to be appropriate in this analysis. Measures intended to achieve use of recycled water on the Course would have to wait for the availability of a reliable supply of water that meets the minimum water quality standards for golf courses. Because there is no current plan for production and delivery of such a water supply, no reductions are anticipated as a result of these measures.

⁶ Steve Cusenza, City of Pleasanton, telephone communication with Mundie & Associates, July 22, 1997.

Table 17
Annual Water Use: Mitigated Estimate

Use	# Units	Gallons per Unit Per Year	Total Gallons Per Year	Acre-Feet Per Year	Percent Reduction from Standard Estimate
Golf course: 18 holes ¹	1	132,000,000	132,000,000	405	0%
Single Family Homes					
Existing	112	225,570	25,263,840	78	0%
New (Potential) ²	179	203,013	36,339,327	112	10%
Total Residential	291		61,603,167	189	6%
Total			193,603,167	594	2%

- 1 Assumes water conservation measures in clubhouse, which is estimated to reduce total golf course water consumption by about 0.4 acre-feet per year..
- 2 Assumes 10 percent reduction in water use with water conservation measures.

Source: Mundie & Associates

Table 18
Peak Day Water Use: Mitigated Estimate

Use	Total Gallons Per Year	Average Gallons Per Day*	Gallons Per Peak Day*	Percent Reduction from Standard Estimate
Golf course: 18 holes	100,000,000	333,333	1,000,000	0%
Single Family Homes				
Existing	25,263,840	69,216	207,648	0%
New (Potential)	36,339,327	99,560	298,679	10%
Total Residential	61,603,167	168,776	506,327	6%
Total	161,603,167		1,506,327	2%

- * Golf course peak is based on independent assessment; residential is three times average based on large lot nature of the Plan Area.

Source: Mundie & Associates

b. Water Supply System

The Specific Plan includes installation of a public water system in the Happy Valley area. This system will provide water to the Golf Course and to residential development. The conceptual plan divides the Specific Plan area into five subareas plus a sixth area that encompasses the Golf Course and Golf Course housing, shown in Figure 17. These areas, and the elements of the water system needed to serve them, are detailed below. Sizes of pipelines and storage facilities are approximate and subject to refinement as the planning process continues.

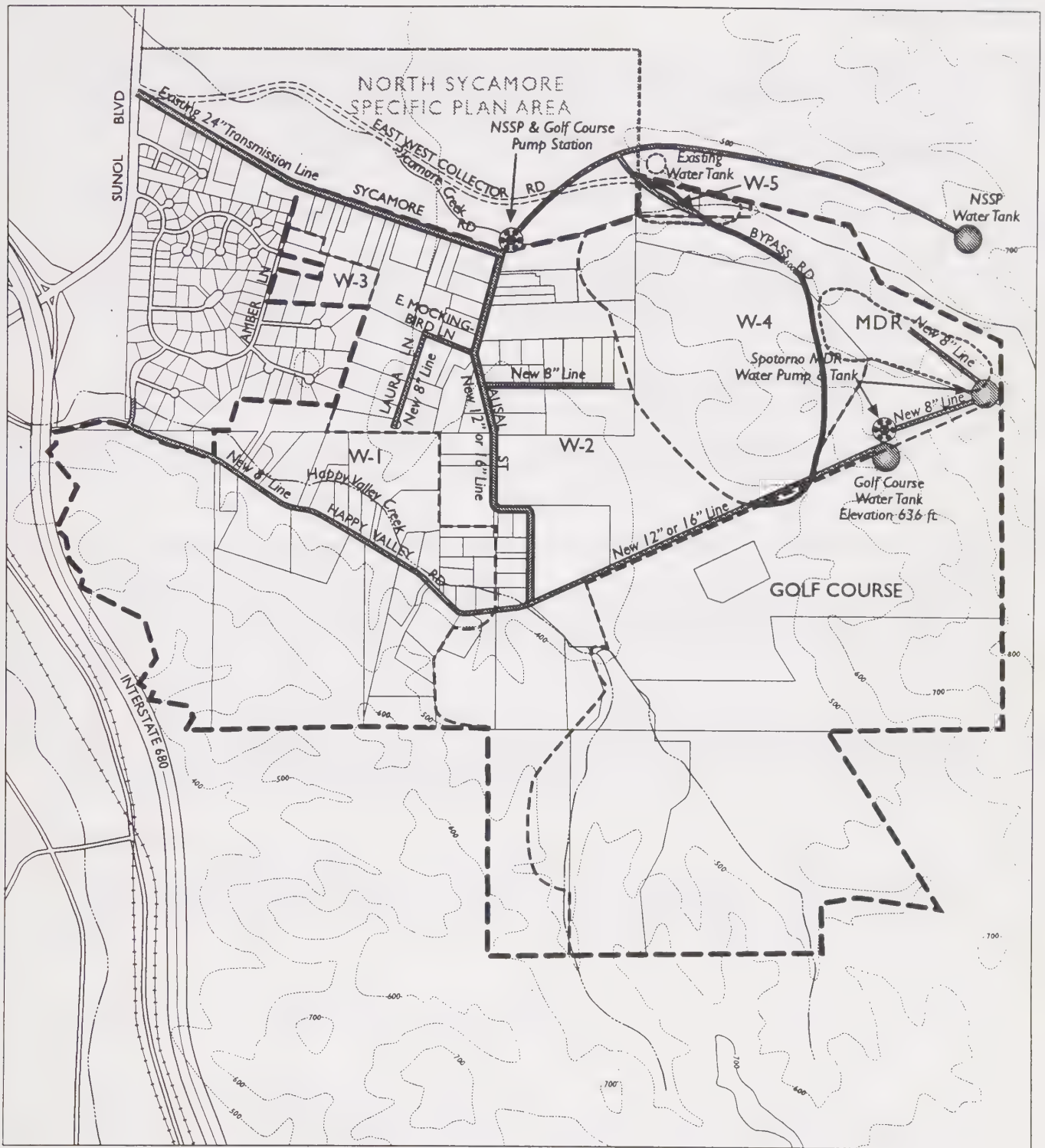


Figure 17

Proposed Water System

Source: City of Pleasanton

- **Golf Course and Golf Course Housing.** The system described below is intended to provide the maximum 24-hour irrigation demand for the Golf Course of one million gallons and maximum fire flow requirements for the clubhouse and the Golf Course housing of 2,250 to 2,500 gallons per minute (gpm) for two hours, or 270,000 to 300,000 gallons:
 - Connection to the Bonde Pressure Zone through the Lower Zone, via a connection to the 24-inch transmission line located near the intersection of Alisal Street and Sycamore Road.
 - Pump station near this connection point, because the Lower Pressure Zone is lower than most of the Plan Area, and therefore can serve only a portion of the Plan Area with adequate water pressure. (This pump station will also provide service for the North Sycamore Specific Plan area.)
 - New 12-inch water line running from the pump station along Alisal Street to its intersection with Happy Valley Road, and then easterly to a future connection to the Bypass Road.
 - A 450,000 gallon steel water tank to provide fire flow and domestic use for the Golf Course and related residential properties. This tank will be located at elevation 636 feet above mean sea level (AMSL).
 - Ponds and/or lakes on the Golf Course to provide irrigation water (not shown in Figure 17).
- **Water Subarea W-1 (Happy Valley Road).** This area includes Happy Valley Road from Carriage Drive to about 300 feet west of Alisal Street. It will be served by a new water line that extends east on Happy Valley Road from a connection with the existing water line located near Carriage Drive.

Several existing homes on the south side of Happy Valley Road are situated above the limits of the Lower Pressure Zone and will require special service, in the form of booster pumps and, possibly, onsite facilities. Some of these homes are also located at a distance from Happy Valley Road that would require longer connection lines to provide water service.

- **Water Subarea W-2 (Greater Happy Valley area).** This area includes all of Alisal Street, the first 300 feet of Happy Valley Road west of its intersection with Alisal Street, Laura Lane, Mockingbird Lane, Horan Lane, and homes fronting on the south side of Sycamore Road within the Plan Area. To serve this area, several elements of the water system required to serve the Golf Course would have to be modified:
 - The 12-inch water line running from the pump station to the Golf Course may be expanded, and the pipe material may have to be ductile iron pipe (DIP) instead of polyvinyl chloride (PVC).
 - The 450,000 gallon water tank may have to be expanded to 650,000 gallons.
 - The pump station would have to be upgraded to serve the additional homes.

The new water distribution line in Sycamore Road that is included in the North Sycamore Specific Plan area is assumed to provide water served to the properties on the south side of Sycamore Road within the Happy Valley Specific Plan area.

The following additional water system elements would also be needed:

- New eight-inch water lines in Laura Lane, East Mockingbird Lane, Horan Lane, and the first 300 feet of Happy Valley Road west of its intersection with Alisal Street.
- **Water Subarea W-3 (Amber Lane/Mockingbird Lane).** Most of the homes in this area are close enough to the existing City water system to be served by the existing system. The two parcels farthest from Amber Lane would need 450 feet of water line to reach the existing water distribution line in Amber Lane.
- **Water Subarea W-4 (Spotorno Upper Valley MDR Area).** This area, located along the Bypass Road, could be developed with as many as 75 single family homes. Water for domestic use and fire protection would be provided by an extension to the Golf Course system that includes the following elements:
 - A water pumping station at the Golf Course water tank (elevation 636 feet AMSL).
 - An eight-inch transmission line from the pumping station to a new 350,000 gallon steel water tank at elevation 810 AMSL, above the proposed development.
 - An eight-inch gravity line from the water tank to the homes.
- **Water Subarea W-5 (Spotorno Upper Valley LDR Area).** This area, situated at the north-west portion of the Spotorno property east of and immediately adjacent to the North Sycamore Specific Plan area, could accommodate five new homes. Water service would be provided via mains extended from the North Sycamore area to the site along the Bypass Road.

c. Protection of Groundwater Quality

The Specific Plan provides protection of groundwater quality by incorporating a Golf Course Management Plan. This plan, described in the Specific Plan (Section VIII.D.3), includes standards for the use and storage of fertilizers, herbicides, and other chemicals.

d. Visual Considerations

The Specific Plan (Section VII.A.3) provides site development standards for site selection, grading, landscape screening, and other suitable treatment to minimize the visibility of water tanks and pump stations.

2. Setting

a. Water Supply and Demand

The water supply system for the City of Pleasanton, and current and projected demands on that supply, are detailed in the Draft Environmental Impact Report on the San Francisco Water Department Bernal Property, published in May, 1997. The information provided in that document (Chapter 5, Part C) is incorporated here by reference and briefly summarized below:

- Zone 7 of the Alameda County Flood Control and Water Conservation District (ACFCWCD Zone 7) is the water wholesale provider to the Tri-Valley area. Zone 7's major customers are Pleasanton, the Dublin-San Ramon Services District (DSRSD), the City of Livermore and the California Water Service.

Zone 7's sources of water include surface water, groundwater, and water imported from the State Water Project.

- Pleasanton supplements the water it obtains from Zone 7 with water from wells owned by the City. The City's contract with Zone 7 obligates Pleasanton to obtain all its water supplies beyond its own well water from Zone 7, and obligates Zone 7 to try to meet all of Pleasanton's requests for water. Pleasanton has historically obtained between 60 and 75 percent of its water supply from Zone 7 with the balance coming from its own wells.
- Water from Zone 7 is generally supplied to Pleasanton through turn-outs to the Pleasanton water system at pressures sufficient to fill Pleasanton's Lower Pressure Zone tanks. The turn-outs currently have the capacity to supply approximately 25.4 million gallons of Zone 7 water per day. Adding the capacity of Pleasanton's own wells at 11.9 million gallons per day results in a total supply capacity of 37.3 million gallons per day. Pleasanton's maximum day demand (1995) is estimated to be 26.6 million gallons, well below the existing supply capacity. Historical and projected peak water day supply (which includes excess storage capacity) and demand are summarized in Table 19.

Table 19
Pleasanton's Peak Day Water Demand Compared to Supply
(millions of gallons per day/mgd)

Year	City Wells ^a	Zone 7	Excess Storage ^b	Total Peak Day Supply	Peak Day Demand ^c	Excess Peak Day Supply ^d
1992 ^e	5.0	15.0	2.2	22.2	22.4	-0.4
1993 ^e	8.4	17.4	2.2	28.0	24.6	3.4
1994 ^f	8.4	25.4	9.9	43.7	25.3	18.4
1995	9.0	25.4	10.9	45.3	26.2	19.1
1996	9.0	25.4	9.0	43.4	27.6	15.8
1997	9.0	25.4	9.3	43.7	28.9	14.8
1998	9.0	25.4	9.2	43.6	30.0	13.6
1999	9.0	25.4	8.6	43.0	30.9	12.1

^a City well pumping capacity is based on an estimate of the "reliable operational capacity" of 9 mgd and not maximum pumping capacity of 12.5 mgd.

^b Tassajara Reservoir came on line after peak day in 1993; other assumptions consistent with Tables V.d-3 and V.d-7 of the 1996 Growth Management Report.

^c Maximum day demand figures for 1995 are an estimate based on the actual 1994 data.

^d A positive number represents the amount of water by which pumping capacity, augmented by available excess storage, exceeds demand. A negative number represents the amount of water required from emergency and/or fire flow storage to overcome pumping shortage.

^e Actual experience; City Well No. 7 out of service in 1992.

^f 1994 Zone 7 supply to Pleasanton increased by 8 mgd from Vineyard Avenue Pipeline and new City turnout.

Source: 1992: City of Pleasanton, 1993 Growth Management Report, p. 178; 1993-94, 1994 Growth Management Report, p. 159; 1995-99, 1996 Growth Management Report, p. V.d-16

- Zone 7's sustainable annual supply is estimated at 54,500 acre-feet annually.⁷ Over the long term, Zone 7 projects annual demand, including demand from municipal, industrial, and agricultural users, in the range of 100,000 acre-feet per year⁸.
- To meet anticipated future water requirements, Zone 7 is actively seeking new sources of water supply. Zone 7 is also seeking ways to offset possible long term reduction of State Water Project deliveries, which could result from long-term drought and/or environmental factors that include increasing in-stream flows and reducing withdrawals from surface waters in the Delta.
- If best management practices and water conservation measures were applied to the entire Zone 7 service area, resulting in an average ten percent reduction in normal consumption, then the 40,900 acre-feet of current annual average supplies could meet the needs of approximately 192,000 people.⁹ The existing general plans for the cities of Pleasanton, Livermore, and Dublin (within the Zone 7 service area) have a population potential of 188,000 people within the Zone 7 water service area. Thus, the total current Zone 7 supplies (with a ten percent conservation factor) exceed the total demand generated by the buildout of the general plans for Pleasanton, Livermore, and Dublin.

b. City Water System

Pleasanton stores its water in a series of tank reservoirs, which are grouped into four main pressure zones (including the Lower Pressure Zone and the Bonde Pressure Zone) and a number of smaller zones throughout the General Plan Planning Area. (Pressure zones are delineated by elevation.) The City's water distribution system is comprised of a system of pipes that are sized to deliver water at sufficient volumes and pressure to service residential, commercial, and industrial users throughout the City.

(1) Distribution System Capacity Leading to Potential Water Users in the Project Area. The City of Pleasanton water system extends to the perimeter of the Happy Valley Specific Plan area. As noted in the "Characteristics of the Project" section of this discussion, existing facilities include a 24-inch transmission line in the western section of Sycamore Road and an 8-inch line in Happy Valley Road extending east from a point near Carriage Drive. Both of these existing lines serve the Lower Pressure Zone, however, and would not be adequate to provide service to the Golf Course or other new development in the Specific Plan area above elevation 380 AMSL (except in Subarea W-3, as indicated above).

(2) Water Storage Capacity. There are no existing water storage facilities that could provide service to the Happy Valley Specific Plan area. The existing tank just north of the northern boundary of the Plan Area (shown in Figure 17) does not have sufficient capacity to serve the project site.

⁷ *Water Demand Projections, 1997-2020*, Zone 7 Water Agency (December, 1997), communicated to Mundie & Associates by Dennis Gambs, Zone 7, February 9, 1998.

⁸ *Ibid.*

⁹ Recycling Study, page 2-4, Figure 2-1: Zone 7 Water Supply and Potential Demand.

3. Impacts

a. Impacts on Adequacy of Water Supply

The Golf Course and residential development that would be permitted by the proposed Specific Plan would increase water demand in Pleasanton by an estimated 194 million gallons (594 acre-feet) per year and peak day demand by 1.5 million gallons (4.6 acre-feet). These estimates assume the incorporation of water conservation measures to the maximum extent possible, as described in the “Characteristics of the Project” portion of this discussion. The peak day demand represents approximately 12.5 percent of projected excess peak day supply in the year 1999, which is the most distant future year for which the City of Pleasanton has compared expected supply and demand.

This EIR recognizes that the water demands associated with a Golf Course are higher than for most developments. The water demands associated with the residential component of the project (connection of existing housing units plus development of new housing units permitted by the Specific Plan) would total 506,000 gallons per peak day, or about 4.2 percent of excess peak day supply projected for the year 1999. This level of demand (for residential use only) is considered less-than-significant.

b. Impacts on the Quality of the Water Supply

As indicated in the “Setting” section of this discussion, current residents of the Specific Plan area rely on wells for their water supply. Water quality in the area is poor enough that the County has imposed a moratorium on new wells. With the installation of a public water supply and connection to the City water system, the quality of the water supplied to and consumed by area residents would improve to meet safe drinking water standards. This change would be a beneficial impact.

Extension of the City’s sewer system to the Happy Valley area, and connection of existing as well as new homes to that system, will also help to improve the quality of groundwater in the area.

c. Impacts on the Adequacy of the City Water System

The Specific Plan includes installation of new water distribution lines, pump stations, and storage facilities to serve the Golf Course as well as existing and new residential development in the Happy Valley area.

To reach these new facilities, water will have to be routed through the City’s existing water distribution system. The volume of water required to serve the Happy Valley Specific Plan Area would not exceed the amount provided for by the Pleasanton Water Master Plan. Water distribution system improvements in place and illustrated in Figure 17 are expected to be adequate to handle demand from this area. Together with other development permitted by the Pleasanton General Plan, buildout of the project will add to existing flows, but will not exceed the capacity of water mains to which the Happy Valley Specific Plan area would be connected. Therefore, the impact on the water distribution system of development permitted by the Specific Plan would be less than significant.

The new water storage facilities included in the Specific Plan would accommodate sufficient capacity to serve all new development in the area. As a result, existing development that connects to the City’s water system would have no adverse impact on water storage capacity.

d. Impacts on Groundwater

The proposed water supply system relies on deliveries from the City system and not on groundwater withdrawals. Therefore, the project is not expected to have an adverse impact on groundwater supplies.

The Golf Course Management Plan that is included in the Specific Plan is intended to prevent groundwater contamination, which might otherwise occur as a result of excessive application of fertilizers, herbicides and other chemicals on the Golf Course and their subsequent percolation or runoff into the groundwater supply. Adherence to the Golf Course Management Plan will reduce the potential for these chemicals to be carried by surface runoff into drainage channels and ultimately to downstream groundwater basins if rain falls in substantial amounts soon after their application to a less-than-significant level.

e. Visual Impacts of New Water Facilities

The Specific Plan requires landscaping and other treatments to screen the two new water tanks from most viewpoints. As a result of this requirement, the tanks are not expected to have a significant visual impact.

f. Impacts Associated with Construction of the Water System

Principal activities associated with construction of the water system would be trenching and laying of pipe, grading and preparing sites for installation of pump stations and water storage facilities, and installation of pump stations and water storage facilities. Temporary, short-term traffic associated with construction activities, as well as disruption of normal traffic, could occur. This issue is addressed in the Specific Plan (Section VI.B.9) and in Chapter 3, Part B of this EIR. Limitations on the hours of construction activity, intended in part to minimize construction-related noise are described in the Specific Plan (Section V.B.8.a) and Chapter 3, Part C of this EIR. Measures to control dust and/or erosion, depending on the time of year, are described in the Specific Plan (Section V.B.8.b) and in Chapter 3, Part D of this EIR.

Environmental resources potentially affected would be cultural resources and biological resources, if such resources are identified along the route. These issues are addressed in Chapter 3, Part P (cultural resources) and Chapter 3, Part J (biological resources).

4. Mitigation Measures

The preceding discussion identifies no significant impacts associated with the water system component of the Specific Plan. Therefore, no mitigation measures are required.

F. INFRASTRUCTURE SYSTEMS: SANITARY SEWER

1. Characteristics of the Project

a. Anticipated Demand for Sewage System Capacity

(1) Estimates Based on Standard Demand Factors. Residential development permitted by the Specific Plan is projected to generate wastewater totaling 81,480 gallons per day (gpd) Average Dry Weather Flow (ADWF). This estimate, which is presented in Table 20, is based on the flow coefficients given in the *Pleasanton Sewer Master Plan*; it assumes that all property owners connect to the City system and that all potential development permitted by the proposed Specific Plan occurs. Golf clubhouse generation is estimated by Pleasanton Public Works within the range of 1,000 to 4,000 gallons per day.

Table 20
Estimated ADWF Wastewater Generation with Standard Generation Rates

Land Use (Units of Measurement)	Amount of Development	Generation Factor (Gallons per Day)	Total Flow (Gallons Per Day)
Single Family Residential* (Units)	290	280	81,200
Golf Clubhouse (Use)	1	1,000 to 4,000	1,000 to 4,000
Total			82,200 to 85,200

* Includes existing units that would connect to the City system and new units that would develop pursuant to the Specific Plan.

Source: City of Pleasanton; Mundie & Associates

(2) Estimates Based on Mitigated Demand Factors. The Specific Plan requires that water conservation devices be installed, consistent with Pleasanton General Plan Water Programs VI-4.5 and 4.6. Installation of such devices in new homes in the Happy Valley area would reduce water consumption in those homes by an estimated 10 percent (see Tables 17 and 18 in Chapter 3, Part E) and wastewater generation by 5 percent.¹⁰ As a result, the amount of wastewater generated by residential development in the Specific Plan area will be reduced from about 81,500 to about 79,000 gpd. A similar reduction could be expected in the Golf Course clubhouse, bringing total wastewater generation to between 80,000 and 83,000 gallons per day, as shown in Table 21.

¹⁰ Steve Cusenza, City of Pleasanton, telephone communication with Mundie & Associates, July 22, 1997.

Table 21
Estimated ADFW Wastewater Generation with Mitigated Generation Rates

Land Use (Units of Measurement)	Amount of Development	Generation Factor per Unit/Sq. Ft. (Gallons per Day)	Total Flow (Gallons Per Day)	% Reduction from Standard Estimate
Single Family Residential				
Existing (Units)	112	280	31,360	0%
New (Potential)* (Units)	179	266	47,614	5%
Total (Units)	291		78,974	3%
Golf Clubhouse* (Use)	1	980 to 3,800	980 to 3,800	5%
Total			79,924 to 82,774	3%

* Assumes 5 percent reduction in wastewater generation with water conservation measures.

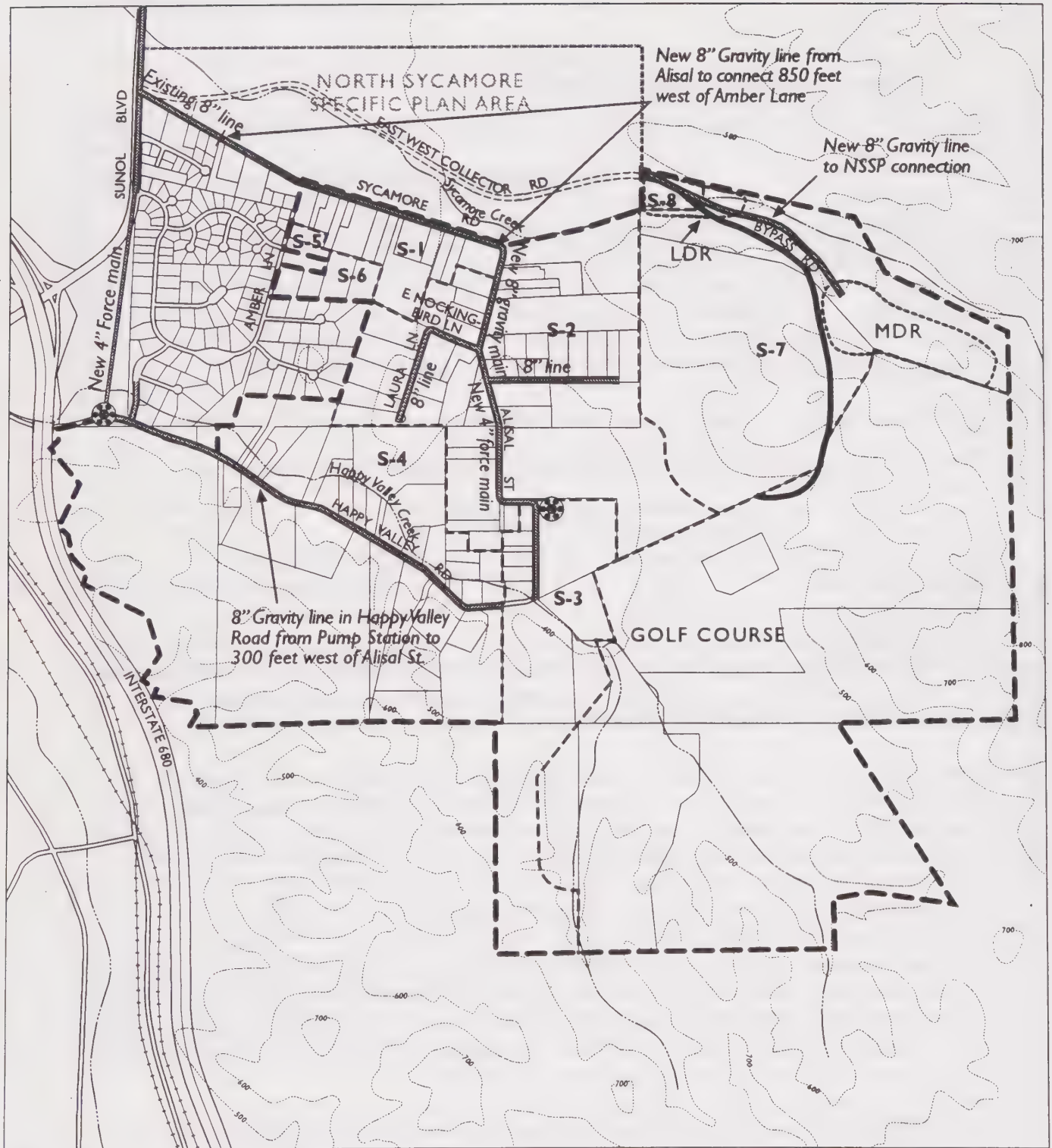
Source: Mundie & Associates




b. Sewer System

(1) Proposed Sewer System. The Specific Plan includes installation of a wastewater collection system that would connect the Study Area to the City of Pleasanton system. For purposes of wastewater collection, the Study Area is divided into eight subareas plus a subarea that covers the Golf Course and Golf Course housing. These nine areas, along with the proposed collection system, are shown in Figure 18.

Sewer service to the Golf Course/Golf Course housing and most other subareas would require new facilities. Service to Subareas S-5 and S-6 could be provided by existing facilities. Facilities expected to provide service to each area are detailed below. Sizes of pipelines and other facilities are tentative, and are subject to refinement as the planning process continues.

- **Golf course and Golf Course housing.** Service would require:
 - A new sewer main that would be installed in Sycamore Road from a connection to the existing sewer main in Sycamore Road (850 feet west of Amber Lane) to Alisal Street, and then south along the full length of Alisal Street. (The portion of this line in Sycamore Road would be installed as part of the North Sycamore Specific Plan. The portion in Alisal Street would be part of the Happy Valley Specific Plan.)
 - A series of gravity lines, a force main (pressurized transfer line), and pump station.
 - An access line to the Golf Course clubhouse (not shown in Figure 18).
 - Gravity lines to the Golf Course housing (not shown in Figure 18).



-  Sewer Line
-  Sewer Subareas
-  Sewer Pump



Source: City of Pleasanton

Figure 18
Proposed Sewer System

- **Sewer Subarea S-1 (Sycamore Road Area).** This subarea serves the lots on the south side of Sycamore Road between Amber Lane and Alisal Street. Service will require the installation of an eight-inch gravity line in Sycamore Road. This line is included in the North Sycamore Specific Plan, and will be constructed and funded as a part of that plan.
- **Sewer Subarea S-2 (Alisal Street Area).** This subarea includes the homes on Alisal Street between Sycamore Road and Lot 99 (Faith Chapel property), the Spotorno Flat area, and the homes on East Mockingbird Lane, Laura Lane, and Horan Lane. System components that would be installed to provide service to this area are:
 - A pump station at or near the northwest corner of the Faith Chapel property (on Alisal Street). This is the same pump station that would serve the Golf Course force main and Subarea S-3.
 - A gravity line from Sycamore Road to the pump station. This line would be separate from, but parallel to, the force main serving the Golf Course.
 - New sewer mains in East Mockingbird Lane, Laura Lane, and Horan Lane to provide service to adjacent properties.
- **Sewer Subarea S-3 (Lower Alisal Street).** This subarea encompasses the length of Alisal Street south of the pump station that would be provided in Subarea S-2. It will be served by the gravity line in Alisal Street that also serves the Golf Course connection to the Subarea S-2 pump station.
- **Sewer Subarea S-4 (Happy Valley Road).** New sewer system components to serve this area, which includes properties on Happy Valley Road from Carriage Drive to a point 300 feet west of Alisal Street, include:
 - A gravity line in Happy Valley Road.
 - A new pump station, located approximately 250 feet west of the intersection of Carriage Drive and Happy Valley Road, outside of the Plan Area.
 - An offsite force main that would carry effluent from the pump station to the high point of the existing sanitary sewer system, in Sunol Boulevard.

Some existing homes on the north side of Happy Valley Road are below the expected grade of the sewer line, and will require grinder pumps to discharge effluent to that line. Special crossings of Happy Valley Creek may also be required. These connections would be subject to review by the U.S. Army Corps of Engineers and the California Department of Fish and Game at the time they are sited and designed. Also, some homes on the south side of Happy Valley Road are a considerable distance from the road and will require longer lateral lines to make the connection.

- **Sewer Subarea S-5 (Amber Lane Area).** No new facilities are needed to provide service to this subarea, which consists of two parcels on Amber Lane. The individual properties will be able to connect to existing system elements that are within the existing City of Pleasanton.

- **Sewer Subarea S-6 (Mockingbird Lane Area).** This subarea contains four parcels in the northeast quadrant of the intersection of Amber Lane and Mockingbird Lane. Like Subarea S-5, it requires no new sewer facilities. Service will be provided by existing lines in Amber Lane and Mockingbird Lane.
- **Sewer Subarea S-7 (Spotorno Upper Valley MDR Area).** Service to this subarea will be provided by a gravity system within the subdivision and in the Bypass Road. The line will extend from the residential area in the Bypass Road to Minnie Road, then along Minnie Road to connect to the future sewer line in Sycamore Road.
- **Sewer Subarea S-8 (Spotorno Upper Valley LDR Area).** Service is provided by extending a sewer line from the eastern boundary of the North Sycamore Specific Plan area. The line would be located in the Bypass Road.

(2) Alternative Sewer System. An alternative, possibly less-costly design for a portion of the sewer system would be feasible if easements through two privately-owned parcels could be secured and a crossing of Happy Valley Creek could be economically engineered. In this alternative, service to Subareas S-1, S-5, S-6, S-7, and S-8 would remain as described above. A new subarea, called Sewer Subarea S-3A, would encompass all of previously-defined Subareas S-2, S-3, S-4, and the Golf Course. It would be provided by the following improvements:

- A new gravity sewer line in Alisal Street from Happy Valley Road to a low point on Alisal Street (where the street turns north again after the east-west segment parallel to the north boundary of Lot 99, the Faith Chapel property).
- A new gravity sewer line in Happy Valley Road from its intersection with Alisal Street to a pump station 250 feet west of Carriage Drive.
- A new gravity sewer line in the aforementioned easements that connects the low point of Alisal Street to Happy Valley Road. This line would require a crossing of Happy Valley Creek. The crossing could be in either an inverted siphon structure or as a suspended pipeline at an upgraded driveway bridge crossing.
- A new pump station located on Happy Valley Road 250 feet west of Carriage Drive. This pump station would be larger and more powerful than the station require to serve Subarea S-4 alone (as described above).

A “subalternative” design for the sewer system that could possibly be accommodated as part of this layout would involve an alternate route for the gravity sewer line and would eliminate the need for this pump station. In this design, a gravity line would be extended west and north to a connection near the southeast corner of the San Francisco Water Department Bernal property near the Arroyo de la Laguna. This subalternative has not been studied, is not covered by this EIR.

(3) Requirement to Minimize Infiltration and Inflow. A significant proportion of wastewater collection capacity (and, consequently, wastewater treatment and export capacity) is absorbed by water that infiltrates the sewer lines from the surrounding earth. The Specific Plan (Section VII.B.2) requires that new sewer lines installed in the Happy Valley Specific Plan area be of a material that minimizes or eliminates infiltration and inflow to those lines.

2. Setting

Alameda County provides no wastewater collection and treatment service in the Study Area. Existing residences and the Faith Chapel in the area dispose of wastewater via private septic tanks. Substandard water quality conditions in the area, resulting from the combined use of private wells for water supply and septic tanks for sewage disposal, prompted Alameda County to impose a moratorium on new development in the late 1970s.

Wastewater collection, treatment and disposal for the City of Pleasanton is provided by several public agencies. The City of Pleasanton collects sewage and transports it to a treatment plant that is owned and operated by the Dublin-San Ramon Services District. DSRSD then transports the treated effluent to a pipeline operated by the Livermore-Amador Valley Wastewater Management Authority (LAVWMA). LAVWMA, in turn, transports the treated effluent to the East Bay Dischargers Authority (EBDA), where it is combined with effluent from the other members of the Authority, dechlorinated, and discharged through a common outfall into San Francisco Bay. These agencies, the services they provide, and their capacities to respond to additional demand are described below.

a. Wastewater Collection: City of Pleasanton Sewage System

The City's sewage collection system currently extends to the perimeter of the Happy Valley Specific Plan area. An existing eight-inch line in Sycamore Road extends to a point 850 feet west of Amber Lane. In addition, there are existing lines in Amber Lane and a portion of Mockingbird Lane.

b. Wastewater Treatment: Dublin-San Ramon Services District Facilities and Services

The Pleasanton collection system carries sewage to the Dublin-San Ramon Services District (DSRSD) Wastewater Treatment Plant (WWTP) located south of Stoneridge Drive and east of Interstate 680. This plant provides secondary treatment of wastewater for the cities of Pleasanton, portions of San Ramon, and Dublin; the Castlewood Country Club; and the Santa Rita Jail and Federal Prison Facilities.

The City of Pleasanton has an agreement with DSRSD (November 3, 1993) entitling Pleasanton to treatment of 7.135 million gallons per day of ADWF. In 1995, Pleasanton produced an ADWF of 5.25 million gallons per day. This volume is expected to grow to 5.8 million gallons per day in 1998. DSRSD is currently preparing a treatment plant master plan which will address the need for additional treatment capacity in the future. The agreement also commits DSRSD to expand treatment capacity to serve Pleasanton on an as-needed basis.

c. Wastewater Export: Livermore-Amador Valley Wastewater Management Authority

Treated wastewater from the WWTP is pumped to an equalization and storage facility before being exported from the Tri-Valley to the San Francisco Bay via a pipeline paralleling Interstate 580. The equalization and storage facility and the export pumps and pipeline are owned and operated by the Livermore-Amador Valley Wastewater Management Authority (LAVWMA), of which Pleasanton is a member.

After treatment at the DSRSD and Livermore plants, treated effluent is transported to the East Bay Dischargers Authority (EBDA) interceptor facilities in San Leandro. This effluent is then combined with treated effluent from four member agencies of EBDA, dechlorinated, and discharged through a common

outfall to central San Francisco Bay, west of the Oakland Airport, approximately 30,000 feet from shore in about 23 feet of water.¹¹

Pleasanton is entitled to an export capacity of 7.503 million gallons per day measured as Average Day Maximum Month (ADMM) wastewater flow, a capacity designed to accommodate demand during wet weather periods. The City's estimated present capacity in terms of ADWF is approximately 6.603 mgd¹²; the balance is capacity necessary for handling increased flows during wet weather, caused by infiltration/inflow.

d. Treatment and Export Capacity Relationships

Pleasanton has made commitments to provide sewage capacity (transport, treatment and export) to various pending developments. These commitments total 1.44 million gallons per day (ADWF). Of this total, approximately 1.20 million gallons per day have been committed by Pleasanton in a legally binding fashion; the remaining 0.24 million gallons per day are reserved for future developments, but no legally binding agreements between the owners and Pleasanton have been reached. The non-legally-binding reserves are "set aside" for residential projects that have Growth Management Plan approval or exemption and for approved commercial/office/industrial projects, but do not become legally binding until the specific projects have paid sewer connection fees (typically at the time a building permit is issued). These approvals have no legal priority over other projects, and the capacity may theoretically be assigned to projects on a first-come, first-served basis.

The City's commitments of sewage capacity are summarized and compared to DSRSD treatment capacity and LAVWMA export capacity in Table 22. Committed capacity will not be "demanded" in the short term. Commitments include residential development with no growth management approval to build until after 2000 and commercial/office/industrial development for unapproved projects totaling many years of absorption by the Pleasanton market. City staff estimate that all of the "committed" capacity will not be utilized (i.e., flowing) until 2005 or later.

The figures in the table make clear the following relationships:

- Dry weather flow capacity available to Pleasanton at the LAVWMA equalization, storage, and export facility (6.603 mgd during winter) is less than capacity available at the DSRSD wastewater treatment plant (7.135 mgd).
- The 1995 ADWF plus the legally binding commitments total 6.45 million gallons per day and the 1995 ADWF plus all the commitments is 6.69 million gallons per day.
- Pleasanton has 0.685 million gallons per day of remaining capacity at the DSRSD treatment plant after demand from existing flows and legal reserves, and 0.445 million gallons per day of capacity after non-legal commitments are added to this demand.
- Pleasanton has 0.153 mgd million gallons per day of remaining capacity at LAVWMA after demand from existing flows and legal reserves. When demand from non-legal commitments is counted, the City's LAVWMA capacity is exceeded by 0.087 million gallons per day.

¹¹ Brown and Caldwell, May 1992, page 2-13.

¹² 1996 Growth Management Report Update, City of Pleasanton, page V.e-4.

Table 22
Wastewater Treatment Capacity Demand and Supply Relationships
(mgd)

		Supply: DSRSD	Supply: LAVWMA
	Demand	(Treatment Capacity)	(Export Capacity)
Total Capacity, ADWF		7.135	6.603 **
Existing ADWF (1995)	5.25 *	-5.250	-5.250
<i>Remaining Capacity After Existing ADWF</i>		1.885	1.353
Pending Development with Legal Commitments	+1.20	-1.200	-1.200
<i>Total Demand After Pending Legal Commitments</i>	6.45		
<i>Remaining Capacity After Pending Legal Commitments</i>		0.685	0.153
Plus/Minus Pending Developments without Legal Commitments	+0.24	-0.240	-0.240
<i>Total Demand After Pending Non-legal Commitments</i>	6.69		
<i>Remaining Capacity After Pending Non-legal Commitments</i>		0.445	-0.087

* 1995 ADWF; estimated ADMM was 6.99 mgd.

** Total Average Day Maximum Month of 7.503 mgd, reduced by 0.9 mgd to account for infiltration/inflow, is an estimate of average dry weather flow equivalent of the export system.

Sources: All information from City of Pleasanton, 1996 Growth Management Report, Chapter V.e, V.e-1 through V.e-4. City capacity at DSRSD provided by Steve Cusenza, City of Pleasanton (corrects erroneous figure in the Growth Management Report).

LAVWMA is actively attempting to provide a larger export capacity to all of its subscribers. The Pleasanton City Council has expressed support of LAVWMA efforts to expand capacity and of negotiations with the East Bay Dischargers Authority (EBDA) for increased export capacity. In addition, the 1996 Pleasanton General Plan calls on the City to cooperate with neighboring jurisdictions to evaluate alternatives for sewage treatment and export capacity expansion (Subregional Planning Element, Program 2.7). It is considered unlikely that all the potential development accounted for in the various City legal and nonlegal reserves will seek building permits before more export capacity is obtained.

Plans for new, expanded export capacities in place have been delayed beyond 1996 by complex negotiations between LAVWMA and EBDA as well as differences of opinion among the LAVWMA jurisdictions. There is no certainty that resolution of these differences or expansion of capacity can be achieved. Regardless of the outcome of the LAVWMA process, however, the City of Pleasanton remains committed to securing sufficient treatment and disposal capacity to accommodate all growth anticipated in the General Plan.

e. Groundwater Quality

Alameda County has imposed a moratorium on new sewage disposal systems in the Happy Valley area since the late 1970s, when it found high coliform (bacteria) counts in approximately 40 percent of the existing wells in the area. The moratorium on new disposal systems has been equivalent to a moratorium on new development, although repairs to existing dwelling units and rebuilding of units have been permitted when applicants have secured variances from the County Board of Supervisors.

According to staff of the County Public Health Department, the adverse water quality conditions in the area result from a combination of shallow wells (70 feet or less), which draw their water from the first layer of groundwater encountered, with a high groundwater table, "tight" soils, and an abundance of sewage drainfields in the area. Staff report "an unusually high incidence" of septic system failures in the Happy Valley area, especially near the intersection of Alisal Street and Happy Valley Road and on Mockingbird Lane.¹³

The conditions that prevail in the area would not be permitted to occur under current development regulations, which specify the minimum acceptable distance from the sewage disposal trench to the highest groundwater.

3. Impacts

(1) Adequacy of Collection System. Wastewater generated would not exceed the amount provided for by the Pleasanton Sewer Master Plan. Collection system improvements in place and illustrated in Figure 18 are expected to be adequate to handle these flows. Together with other development permitted by the Pleasanton General Plan, buildout of the project will add to existing flows, but will not exceed the capacity of sewer mains to which the Happy Valley Specific Plan area would be connected. Therefore, the impact on the collection system of development permitted by the Specific Plan would be less than significant.

(2) Adequacy of Treatment Facilities. The additional flows generated by the project site could contribute to a possible future shortfall of treatment capacity at the DSRSD wastewater treatment plant.

According to Table 22, Pleasanton currently has 0.685 mgd of treatment capacity available at the DSRSD plant after existing flows and legally committed reserves. Wastewater generated by development permitted by the Specific Plan (approximately 0.80 mgd, estimated based on the mitigated generation rates) would reduce remaining capacity to about 0.605 mgd.

When non-legally committed reserves are included, Pleasanton has 0.445 mgd of remaining treatment capacity available. Development permitted by the Specific Plan would reduce remaining capacity to about 0.365 mgd.

¹³ Joe Winchester, Alameda County Public Health Department, telephone communication with Mundie & Associates, October 28, 1997.

At this level, the impact of increased wastewater flows on the capacity of treatment facilities is not considered a significant project-level impact. DSRSD is currently working on plans to expand the capacity of the WWTP to meet Pleasanton's needs (per the agreement dated November, 1993). Because Pleasanton charges a sewer connection fee for all development to finance any needed improvements, funding should be available to pay for plant expansions when they are required.

The increase in wastewater flows generated by the project could, however, be considered a cumulative impact on the adequacy of wastewater treatment facilities. Together with other development permitted by the Pleasanton General Plan, buildout of the project will use up or exceed existing treatment capacity. This impact is discussed in Chapter 5.

(3) *Adequacy of Export Capabilities.* The additional wastewater flows generated by the project site could contribute to an impending shortfall of export capacity at the LAVWMA facilities. Capacity available to the City of Pleasanton exceeds current flows and legally reserved flows, but pending developments that do not have legal commitments could generate additional flows that exceed the remaining capacity (see Table 22).

Projected wastewater generated by development under the Specific Plan (approximately 0.080 mgd), in combination with existing flows and legal reserves, would reduce remaining capacity to approximately 0.073 mgd. If all projects for which non-legally encumbered reserves have been identified were to be developed, then the shortfall, which is currently estimated at 0.087 mgd, would increase to 0.167 mgd.

Because the increase in wastewater flows generated by the project would not cause the City of Pleasanton to exceed its committed export capacity (notwithstanding demands generated by pending developments without legal commitments) and LAVWMA and the City of Pleasanton are currently working on expanding export capacity, the project is considered to have a less-than-significant impact on wastewater export capacity. Together with other development permitted by the Pleasanton General Plan, however, buildout of the project will use up or exceed existing treatment capacity. This potential cumulative impact is discussed in Chapter 5.

(4) *Impacts on Water Quality.* Sewer system improvements to be installed as the Specific Plan is implemented will have a beneficial impact on water quality in the Happy Valley area only if existing homes in the Plan Area connect to the City's sanitary sewage system. Existing homes would not, however, be required to connect to the City system.

4. Mitigation Measures

The preceding discussion identifies no significant project-level impacts associated with the wastewater system component of the Specific Plan. Therefore, no mitigation measures are required.

G. INFRASTRUCTURE SYSTEMS: DRAINAGE

1. Characteristics of the Project

To address changes in storm water runoff and drainage conditions that could result from development permitted by the Specific Plan, the Plan includes the following provisions:

- Design and construction of the project must comply with the Alameda Countywide Clean Water Program requirements for best management practices to control non-point source runoff pollutants.
- Design of the Golf Course to include storm water detention facilities. These facilities will help reduce peak flows to Happy Valley Creek, and will thus reduce both the frequency and severity of downstream flooding.
- Along Happy Valley Road, grading of earthen vee ditches at existing cross drains, cleaning of existing drainage ditches, and replacement of driveway culverts as necessary to maintain positive fall at all of the vee ditches. These actions are intended to reduce sheet flow of storm water runoff over Happy Valley Road.
- Along Alisal Street, cleaning of culverts and minor grading to improve existing drainage conditions, and replacement of private driveway culverts at the corrected grade at several locations along the street.

In addition, the developer of the Spotorno Flat area will be required to replace crossroad drain lines with properly-sized culverts, improve site drainage by constructing an earthen vee ditch with consistent fall (or other comparable improvement), and construct storm water detention facilities on the Spotorno Flat Area. These improvements would be completed prior to occupancy of the site.

- In the Spotorno Upper Valley Medium Density Residential area, construction of storm water detention facilities to reduce increases in runoff into Sycamore Creek.
- Evaluation of the existing Spotorno Dam by a qualified professional engineer or engineering geologist prior to, or in conjunction with, construction of the Bypass Road. The engineering methods used to build this dam are not fully understood, and it is therefore not known whether the dam meets current construction standards and would provide adequate protection against downstream flooding once the Spotorno Upper Valley residential areas are developed. The required evaluation would address safety and stability. If any required upgrades are identified as a result of this evaluation, they would be completed prior to completion of the Bypass Road.
- The golf course improvements must include construction of a maintenance facility for servicing of equipment required for golf courses operations (such as mowers and aerators) and golf carts. The maintenance of this equipment would be conducted within a building or under a roofed and paved area to isolate spills or residues of maintenance-related pollutants from storm water runoff. The maintenance area would also be the site of hazardous materials (e.g., lubricants, coolant, and cleaners) storage and an aboveground fuel tank. The maintenance areas would be operated under a storm water pollution prevention plan that would include implementation of structural e.g., drainage inlets with oil/water separators or filters, secondary containment for

hazardous spills) and non-structural (e.g., “good housekeeping” policies, dry cleanup of spills) Best Management Practices (BMPs).

To address potential impacts on water quality that would result from Golf Course design, construction, and operation, the Specific Plan requires preparation and adoption of a Golf Course Design and Management Plan, an Integrated Pest Management Plan, and a Water Quality Monitoring Plan prior to Golf Course construction. The City of Pleasanton would be responsible for compliance with this Specific Plan requirement.

The scopes and contents of these three required plans are summarized below:

- **Golf Course Design and Management Plan.** A Golf Course Design and Management Plan shall be developed that, when properly implemented, would reduce or eliminate impacts to surface water quality from Golf Course operation and maintenance. This plan would, at a minimum:
 - ***Minimize Golf Course runoff into nearby creeks.*** The plan would require (1) a minimum ten-foot natural vegetated buffer between the edge of irrigated turf grass and the top of bank of sensitive drainages and (2) drainage of all maintained turf areas away from nearby creeks and toward facilities planned to accommodate and manage runoff. These runoff management facilities include the new lake(s) planned for the Golf Course and grassed swales, area drains, and/or sumps for percolation.

Flow of Golf Course drainage away from creeks and drainage channels must be shown on grading and drainage plans.

Areas of maintained turf grass that drain towards creeks and drainage channels shall be minimized, and any such areas shall be indicated in the grading and drainage plans. Those areas shall be planted in either low maintenance turf grasses or naturalized or native grasses; alternatively, the areas shall be separated from the creeks or drainage channels by vegetated natural buffer areas.

Areas of high maintenance such as tees, fairways, and greens will be required to drain away from sensitive drainages.

Areas between golf holes shall generally be left in naturalized grasses to catch and obstruct runoff. Where this is not possible, in particular where there are long continuous slopes, areas between golf holes shall be graded to minimize high velocity flows.

- ***Manage discharge from subdrains.*** The Golf Course will be designed so that drain pipe discharge points from subdrains of greens or tees drain into vegetated swales or irrigation storage lakes. The subdrain discharge points may not be within 100 feet of a drainage channel. Discharge pipes must be directed to dense turf grass areas that can act as a biotic filter and allow percolation. The location of all drainages shall be indicated on the grading and drainage plans.

In most cases, it should be possible to provide a minimum of 100 lineal feet of grassy swale treatment (a sinuous swale, if necessary to increase length) prior to discharge to creeks. Grading and drainage systems shall be designed so that discharge occurs on the far side of the green or tee from the creek and, therefore, must travel in a grassy swale or thatch layer back around the tee or green to reach the creek. If subdrain discharge points *must* be within 100 feet of sensitive drainages to accommodate overall golf course design, alternative Best

Management Practices (BMPs) shall be implemented to provide an equivalent level of runoff treatment. BMPs that may offer an equivalent level of treatment relative to 100 feet of overland or swale flow through turfgrass include infiltration (vaults or trenches) and media filtration (sand or sand/peat mixtures) features.

- ***Minimize the use of high maintenance turf grass.*** The Golf Course Design and Management Plan shall reduce the amount of high maintenance turf grasses where possible. Turf grasses that require less fertilization, such as fescues and ryegrass, shall be used for larger areas of turf grass. Out-of-play areas shall use native plants, where possible.

An efficient irrigation system shall be used, including a means of matching watering requirements with the evapotranspiration rate of the plants. Runoff shall be recycled back into the irrigation system through use of irrigation storage lakes as collectors, wherever possible. These requirements shall be indicated on the irrigation plans.

- ***Minimize erosion by stabilizing creek channels.*** The plan requires that newly-constructed (relocated) creek channels be designed and constructed to be stable. In addition, unstable portions of existing channel shall be stabilized to prevent further channel incision. The design should avoid abrupt changes in channel gradient and creek channel restrictions to flow (e.g., abutments for in-channel golf cart bridges). The designers shall consider use of coarse rock fragments (such as cobbles and boulders) and vegetation within drainage swales and creeks to limit flow velocities and erosion of the channel bed, stabilize the channel banks, improve the aesthetic appearance, and provide for some runoff filtration/treatment. Rock and vegetation in creeks would also discourage golf play within the channel, minimizing potential water quality impacts caused by users of the course.

Transitions from graded areas to existing unmodified creek channels shall be carefully designed to avoid creation of nickpoints¹⁴ and abrupt changes in channel conditions that could lead to instability. Steepened channel reaches shall, where necessary, include channel grade controls. Energy dissipation structures shall be included in the design of the outlets of culverted sections of the creek to avoid erosion of creek channels. Golf cart creek crossings shall be designed to eliminate potential erosion impacts associated with golf carts in creeks. Either bridges or paved surfaces shall be provided at each crossing. Obstructions (e.g., appropriate vegetation and rocks) shall be placed along the creek at each crossing to discourage “off-path” travel through the creek channels.

- **Integrated Pest Management Plan (IPM).** The IPM shall be prepared by a qualified agronomist or turf grass specialist approved by the City and approved prior to the seeding and germination of turf grass. The IPM shall be guided by the principles of (1) minimizing the use of pesticides on the Golf Course, (2) using pesticides only in response to a persistent pest problem, (3) prohibiting preventative chemical use, and (4) fully integrating cultural and biological approaches to pest control into the IPM, with an emphasis toward reducing pesticide application. Consistent with these principles, the IPM will:
 - Address and recommend methods of pest prevention and turf grass management that use pesticides as a last resort in pest control.

¹⁴ The point of abrupt steepening of a stream profile.

- Specify types and rates of fertilizer and pesticide application. Special attention in the IPM shall be directed toward avoiding runoff of pesticides and nitrates into sensitive drainages or leaching into the shallow groundwater table.
- Detail how fertilization requirements are to be reduced during turf grass grow-in. Fertilizer requirements for turf grass germination and maturation can be lowered by ensuring topsoil is maintained or replaced during grading operations to sustain the organic quality of the native soil. Organic amendments such as sludge, manure, fir bark, or peat greatly increase the organic quality of the soil and greatly reduce fertilizer needs. These organic amendments also increase percolation rates and act as stronger binder for the adsorption of fertilizer and pesticide compounds. Soil tests shall be performed prior to seeding to determine the proper fertilization rates pre- and post- seeding.
- **Water Quality Monitoring Plan.** A Water Quality Monitoring Plan shall be prepared and implemented to evaluate the effectiveness of the Storm Water Pollution Prevention Plan (SWPPP; see the discussion of NPDES requirements on p. 89) and Golf Course Design and Management Plan at protecting surface and groundwater quality in the vicinity of the site. The Water Quality Monitoring Plan shall be prepared by the applicant and submitted to the City of Pleasanton for review and approval prior to issuance of grading permits. The Plan shall include the following:
 - **Identification of sampling locations.** The plan shall establish fixed surface and groundwater sampling locations. Surface water samples shall be collected from detention basin outlets during the first significant storm event of the rainy season each year (“first flush”). In addition, surface water samples shall be collected from creeks that drain the proposed Golf Course. Groundwater samples shall be collected from shallow monitoring wells installed in areas of high groundwater conditions, particularly in alluvial sediments along the seasonal creeks and near detention basins.
 - **Establishment of sampling parameters, protocols, and frequency.** The Plan shall establish the compounds to be analyzed based on the uses of the site. For example, samples collected from areas which drain the Golf Course shall be analyzed for the specific pesticide and herbicide compounds used on the course. The Plan shall also establish the required sampling protocols and frequency for each sampling event so that consistent high quality data can be compiled.
 - **Establishment of criteria for data analysis and review.** The plan shall establish criteria for evaluating the data (e.g., regulatory threshold values for pollutants). Once collected, the data shall be analyzed by a qualified professional and compared to the established criteria to evaluate potential impacts. If water quality degradation is identified, the qualified professional shall recommend actions to mitigate the impact. Reports summarizing the analytical data and conclusions shall be submitted to the City of Pleasanton for review and approval on an annual basis.

2. Setting

a. Climate

The climate of the Pleasanton area is characterized as Mediterranean, with cool wet winters and warm dry summers. The mean annual rainfall in the vicinity of the project site, the majority of which falls between October and April, is approximately 18 inches.¹⁵ Analysis of long-term precipitation records indicates that wetter and drier cycles lasting several years are common in the region. Severe, damaging rainstorms occur at a frequency of about once every three years.¹⁶

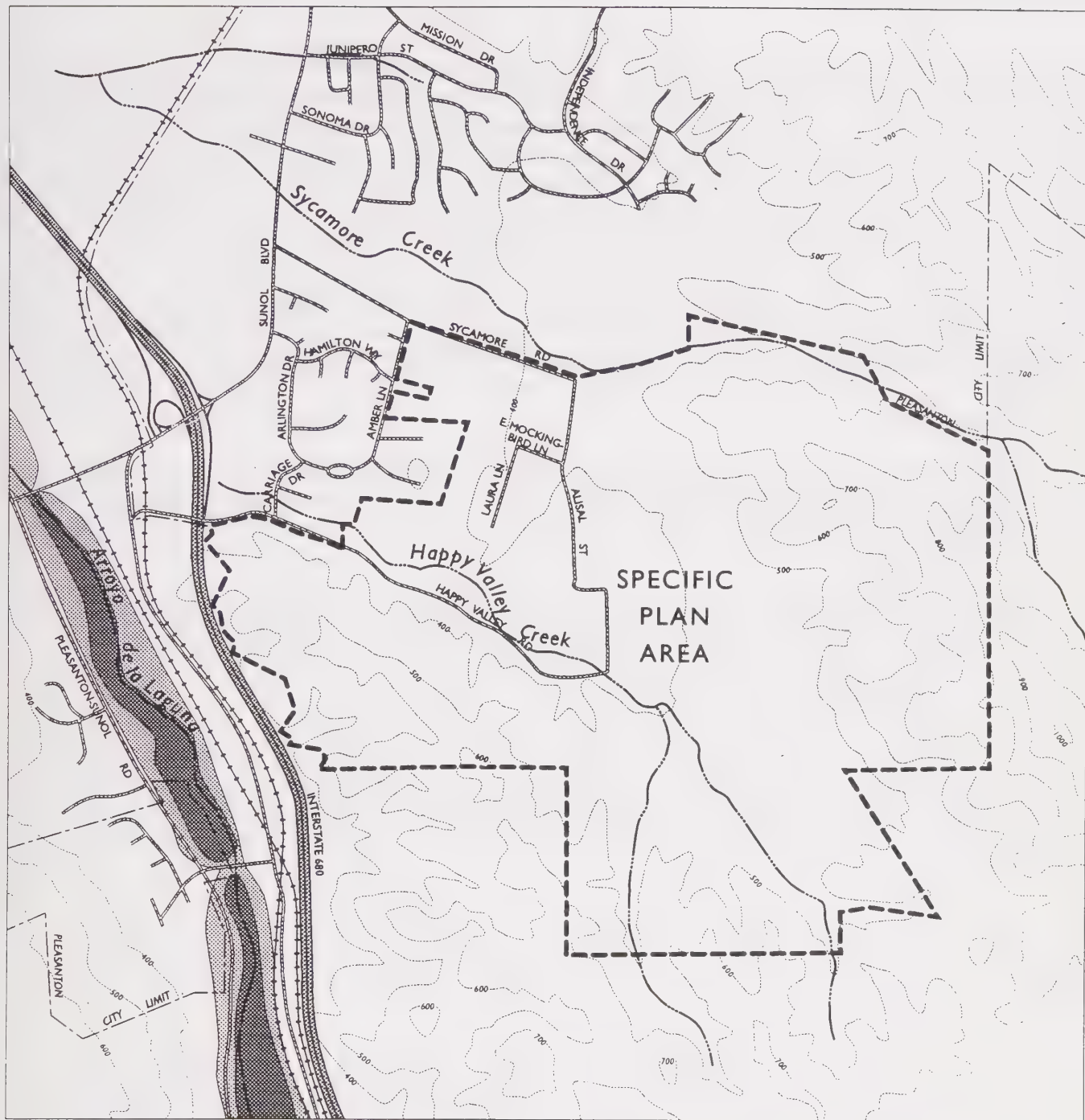
b. Drainage and Flooding




The 860-acre project site is part of the Livermore-Amador Valley hydrologic region. The site consists of varied topography, including a central band of northwest-southeast trending lowlands with uplands to the northeast and southwest. Ground surface elevations range from a low of approximately 340 feet above mean sea level (msl) at the western boundary of the project site along Happy Valley Road, to approximately 863 feet msl in the upland area in the eastern portion of the project site. Two creeks traverse the project site: Happy Valley Creek (which flows southeast to northwest along Happy Valley Road) and Sycamore Creek (which flows east to west along the northern boundary of the project site). During storms, these two creeks receive surface water flow from several unnamed tributaries and overland flow. These creeks are tributaries to Arroyo de la Laguna. Arroyo de la Laguna, the only stream flowing out of the Livermore-Amador Valley, connects with Alameda Creek, and is located within the Alameda Creek Watershed. Water flowing in these creeks evaporates, infiltrates into the subsurface, or eventually discharges into the San Francisco Bay through the Coyote Hills Alameda County Flood Control Channel. Hydrologic features of the area, including the creeks and nearby flood-prone locations (discussed below), are shown in Figure 19.

In an undeveloped setting, when rainfall intensities exceed the infiltration capacity of surface soils, runoff flows over the ground surfaces toward established natural drainage channels. Stormwater runoff is then conveyed away from the area in creeks and streams. In a developed setting, as in the proposed project, an increased portion of the natural soils would be covered with impervious surfaces (i.e. roads, driveways, and roofs), increasing amounts and altering flow patterns of runoff. In developed portions of the City, storm drainage is conveyed in underground pipes, channels, and, to a lesser extent, swales. New development is required to install adequately-sized storm drains, connected to the City system, to accommodate increased runoff volumes.

¹⁵ Rantz, S.E., 1971, "Mean Annual Precipitation and Precipitation Depth-Duration-Frequency Data for the San Francisco Bay Region, California," U.S. Geological Survey, Open File Report 3019-12, October.

¹⁶ Brown, William M. III, 1988, "Historical Setting of the Storm: Perspectives on Population, Development, and Damaging Rainstorms in the San Francisco Bay Region," in *Landslides, Floods, and Marine Effects of the Storm of January 3-5, 1982, in the San Francisco Bay Region*, California, Stephen D. Ellen and Gerald F. Wicczorek, Eds., U.S. Geological Survey Professional Paper 1434.



-  100-Year Flood Hazard Zone
-  500-Year Flood Hazard Zone
-  Creek



0 500 1000 2000
FEET

Source: Base - U.S. Geological Survey 7.5 min. quadrangles:
Dublin, Livermore, Niles, and La Costa Valley
Flood Zones: FEMA, 1986

Figure 19
Hydrologic Features

The project site is not susceptible to regional flooding hazards, as mapped by FEMA.¹⁷ The nearest 100-year flood hazard zone is located approximately 1,000 feet west of the western boundary of the project site along the Arroyo de la Laguna. Localized flooding does occur within the project area along Happy Valley Creek, Happy Valley Road, Alisal Road, and at Sycamore Creek downstream of the Spoto-rno Upper Valley lands. These localized flooding problems are largely due to flow restrictions caused by bridges and lack of adequate vee ditches along the roadways.¹⁸ Flooding at the bridges and under-sized culverts has been reported to affect nearby existing homesites.

The project site is not located within mapped dam failure inundation areas.¹⁹ The elevation of the project site (ranging from 340 to 863 feet above mean sea level) and distance from the coast preclude potential inundation by coastal hazards, such as tsunamis, extreme high tides, or sea level rise.

c. Water Quality

The quality of surface and groundwater at the project site is affected by land uses within the entire watershed. Drainage from the site could affect the quality of water in larger creeks and drainages downstream. If persistent degradation of surface waters were to occur, groundwater quality could be affected at infiltration/recharge areas.

Water quality in surface and groundwater bodies is regulated primarily by the State and Regional Water Quality Control Boards. The project site is under the jurisdiction of the San Francisco Bay Regional Water Quality Control Board, which is responsible for implementation of State and Federal water quality protection guidelines in the vicinity of the project site.

(1) Surface Water. Surface water occurs within the project site in two seasonal drainages (Happy Valley Creek and Sycamore Creek) and various springs. Water quality monitoring data for these surface water features were not available. It is expected, however, that water quality in the creeks is affected by agricultural land use. Past and current agricultural practices may contribute increased nutrient loading and residual pesticides to the creeks.

(2) Groundwater. The central portion of the project site is located within the Bernal subbasin of the Livermore-Amador Valley Groundwater Basin. The northeast and southwest uplands are outside the boundaries of the Livermore-Amador Valley Groundwater Basin "areas of hydrologic significance" and are not expected to be underlain by significant groundwater aquifers.

Regional groundwater flow within the southern Bernal Subbasin is generally to the west toward the Arroyo de la Laguna. Based on the configuration of the Happy Valley and the regional groundwater flow direction, groundwater flow in the project site would be expected to be to the northwest. Depth to groundwater varies with the seasons and wet/dry periods, but was estimated to be approximately 30 feet

¹⁷ Federal Emergency Management Agency (FEMA), 1997, *Flood Insurance Rate Map (FIRM)*, Alameda County, California (Unincorporated Areas), Community Panel Number 060001 0205C, 17 September.

¹⁸ Rasmussen, Wayne, 1997, Principal Planner, City of Pleasanton, personal communication with Bruce Abelli-Amen of BASELINE, 4 June.

¹⁹ Association of Bay Area Governments (ABAG), 1980, *Map of Dam Failure Inundation Areas*, San Francisco Bay Region, March.

below the ground surface in the Happy Valley along Sycamore Road in 1994.²⁰ Year-round springs which occur throughout the project site indicate that, in some areas, the groundwater table reaches the surface. There are no designated primary groundwater recharge areas in the Happy Valley project site.²¹

The U.S. Geological Survey and the Alameda County Flood Control and Water Conservation District, Zone 7 (Zone 7), as part of a cooperative agreement, established a network of groundwater monitoring wells to monitor water quality within the Livermore-Amador Groundwater Basin. Although there are no network monitoring wells located within the Happy Valley, there are several wells in the southern Bernal Subbasin, which are proximal to Happy Valley and may reflect groundwater quality at the project site. The southern Bernal Subbasin groundwater is characterized by moderate specific conductance (1,000 to 1,500 microhmhos), a magnesium-sodium cation type, moderate chloride content (20 to 30 percent of total anions), low nitrate (as nitrogen) concentration (less than 5 milligrams per liter), and low boron concentrations (less than 1.0 mg/L).²²

Zone 7 and the Alameda County Environmental Health Department currently enforce a moratorium on new septic systems in the vicinity of the project site. The policy, in place since the mid 1970s, is based on concerns about public health. Many historic shallow wells and septic systems have been installed in the same small water-bearing zones, resulting in contamination of many wells.^{23,24} Currently, parcels under five acres cannot be developed and serviced with septic systems without additional investigation and monitoring.²⁵ Both Zone 7 and the Alameda County Environmental Health Department recommend that the area be connected to the City sanitary sewer system to accommodate any new development.²⁶

The Alameda County Water District (ACWD) is a retailer of potable water to the cities of Fremont, Newark, and Union City. A significant portion of the water supplied by the ACWD is derived from runoff from the Alameda Creek Watershed, including State Water Project entitlement water which is transported via Alameda Creek. Potential degradation of water quality in surface water runoff which enters Alameda Creek, could eventually enter the groundwater aquifer, affecting drinking water supplies for several hundred thousand users.

20 Zone 7, Alameda County Flood Control and Water Conservation District, 1994, Memorandum and Data Package: Spring 1994 Groundwater Contour Map, Livermore-Amador Valley, 1 June.

21 United States Geological Survey (USGS), 1985, *Water-Quality Conditions and an Evaluation of Ground- and Surface-Water Sampling Programs in the Livermore Amador Valley, California*, Water Resources Investigations Report, 84-4352.

22 USGS, 1985, op. cit.

23 Camp, Dresser, & McKee, Inc., 1982, *Wastewater Management Plan for the Unsewered, Unincorporated Area of Alameda Creek Watershed Above Niles*, prepared for Zone 7, Alameda County Flood Control and Water Conservation District, 19 May.

24 Winchester, Joe, 1997, Inspector, Alameda County Environmental Health, personal communication with Bruce Abelli-Amen of BASELINE, 9 June.

25 Wong, Vince, 1997, Assistant General Manager, Zone 7 Water Agency, personal communication with Bruce Abelli-Amen of BASELINE, 6 June.

26 Wong, Vince, 1997, Ibid. and Winchester, Joe, 1997, op. cit.

3. Impacts

a. Significance Criteria

Substantial flooding, degradation of water quality, contamination of a public water supply, substantial interference with groundwater recharge, and altering the direction or flow of groundwater are considered significant effects under CEQA Guidelines.

b. Impacts

(1) Storm Drainage Impacts. Development of the project site, particularly areas of proposed residential development, would result in an increase in the amount of impervious surfaces (buildings, paved roadways and driveways). Undeveloped, vegetated lands generally have low runoff coefficients, meaning that they yield a relatively small portion of the total rainfall as runoff. The majority of the precipitation, particularly in smaller storms, infiltrates into the subsurface. Impervious surfaces yield nearly all rainfall as runoff. Increased runoff volume could exceed the capacity of downstream drainage components, causing localized flooding. The Golf Course would not be expected to significantly increase runoff volumes relative to existing conditions; in fact, the planting and maintenance of turf grass, with its underlying thatch layer, could increase infiltration rates for the completed golf course relative to existing conditions. Increased infiltration would decrease runoff volumes (potentially alleviating flooding problems downstream), decrease erosion and sedimentation, and result in longer duration flows in creeks due to higher groundwater levels resulting from added filtration.

Elements of the proposed Specific Plan, in combination with existing City review processes for grading and drainage, will reduce the potential increase in runoff to a level of insignificance. Specifically:

- The project proposes to decrease runoff from the 18-hole Golf Course area by creating detention basins, effectively reducing existing flooding problems downstream.
- Runoff from the Spotorno Upper Valley Medium Density Residential area and the Spotorno Flat Area would be decreased by creating detention basins in each of those areas.
- A building permit application for each project would be submitted to the City of Pleasanton for review and approval. Grading and drainage plans would be reviewed for compliance with City requirements.

(2) Water Quality Impacts. Construction activities and post-construction site uses associated with the project could result in degradation of water quality in nearby surface water bodies by reducing the quality of storm water runoff.

(a) Impacts During Construction. Construction period impacts could include:

- Temporary disturbance of surface soils and removal of vegetative cover during construction and grading within the project site. During the construction period of the project, grading and excavation activities would result in exposure of soil to runoff, potentially causing erosion and entrapment of sediment in the runoff. Soil stockpiles and excavated parcels in the project site would be exposed to runoff and, if not managed properly, the runoff could cause erosion and increased sedimentation in storm sewers or water courses at or away from the project site. The

accumulation of sediment could result in blockage of flows, potentially resulting in increased localized ponding or flooding.

- Release of chemicals at construction sites. Once released, substances such as fuels, oils, paints, and solvents could be transported to nearby surface waterways and/or groundwater in storm water runoff, wash water, and dust control water, potentially reducing the quality of the receiving waters.

Water quality of runoff is regulated by the Federal National Pollution Discharge Elimination System (NPDES) Program (established by the Clean Water Act). The program objective is to control and reduce pollutants to water bodies from nonpoint discharges. The program is administered by the California Regional Water Quality Control Boards. The San Francisco Bay Regional Water Quality Control Board (RWQCB) issues NPDES nonpoint source permits for discharges to water bodies in the San Francisco Bay region for municipalities and major industries.

Projects disturbing more than five acres of land during construction are required to file a Notice of Intent (NOI) to be covered under the State NPDES General Construction Permit for discharges of storm water associated with construction activity. A developer must propose control measures that are consistent with the State General Permit.

A Storm Water Pollution Prevention Plan (SWPPP) is required by NPDES be developed and implemented for each site covered by the General Permit. A SWPPP must include Best Management Practices (BMPs) designed to reduce potential impacts to surface water quality through the construction and life of the project. When properly implemented, the SWPPP will reduce or eliminate impacts to surface water quality from all phases of the project. Required elements of the SWPPP include:

- **Construction Storm Water Management Controls.** These controls shall include practices to minimize the contact of construction materials, equipment, and maintenance supplies (e.g. fuels, lubricants, paints, solvents, adhesives) with storm water. The SWPPP shall specify properly designed centralized storage areas that keep these materials out of the rain.

An important component of the storm water quality protection effort is knowledge of the site supervisors and workers. To educate on-site personnel and maintain awareness of the importance of storm water quality protection, site supervisors shall conduct regular tailgate meetings to discuss pollution prevention. The frequency of the meetings and required personnel attendance list shall be specified in the SWPPP.

The SWPPP shall specify a monitoring program to be implemented by the construction site supervisor, and must include both dry and wet weather inspections. City of Pleasanton personnel shall conduct regular inspections to ensure compliance with the SWPPP (this is already standard procedure). RWQCB personnel, who may make unannounced site inspections, are empowered to levy considerable fines if it is determined that the SWPPP has not been properly prepared and implemented.

- **Erosion and Sediment Control.** Best Management Practices (BMPs) designed to reduce erosion of exposed soil may include, but are not limited to: soil stabilization controls, watering for dust control, perimeter silt fences, placement of hay bales, and sediment basins. The potential for erosion is generally increased if grading is performed during the rainy season as disturbed soil can be exposed to rainfall and storm runoff. If grading must be conducted during the rainy

season, the primary BMPs selected shall focus on erosion control, that is, keeping sediment on the slopes. End-of-pipe sediment control measures (e.g. basins and traps) shall be used only as secondary measures. If hydro seeding is selected as the primary soil stabilization method, then slopes shall be seeded by September 1 and irrigated to ensure that adequate root development has occurred prior to October 1. Entry and egress from the construction site shall be carefully controlled to minimize off-site tracking of sediment. Vehicle and equipment wash down facilities shall be designed to be accessible and functional both during dry and wet conditions.

An additional source of information regarding BMPs is the *California Storm Water Municipal and Construction Activity BMP Handbooks*²⁷ (Storm Water Quality Task Force, 1993). The selection of BMPs required for a specific project is based on the size of the development and the sensitivity of the area.

- **Post-Construction Stormwater Management.** This term refers to measures taken to prevent storm water pollution associated with post-construction activities at the developed site.

New construction and intensified land uses would result in increased vehicle use and potential discharge of associated pollutants. Leaks of fuel or lubricants, tire wear, and fallout from exhaust contribute petroleum hydrocarbons, heavy metals, and sediment to the pollutant load in runoff being transported to receiving waters. Long-term degradation of water quality runoff from the site could impact water quality in Alameda Creek, which recharges the groundwater aquifer and acts as a conveyance for State Water Project water transfers. Degradation of water quality in Alameda Creek could impact drinking water supplies and would be considered a significant impact unless mitigated.

Since the project includes relatively low-density development (one-half to two-acre residential lots), it may be practical for the design of the residential development areas to include “no net gain” in stormwater runoff from the site. Large single-family home lots generally provide many opportunities for stormwater management, including unit pavers on a sand patios, concave lawn/infiltration basins, and dry-wells connected to roof downspouts. The final design team for the project should review *Start at the Source, a Residential Site Planning & Design Guidance Manual for Stormwater Quality Protection*.²⁸

The specific BMPs that would be required of a project can be found in *San Francisco Bay Regional Water Quality Control Board Staff Recommendations for New and Redevelopment Controls for Storm Water Programs* (1994). The selection of BMPs required for a specific project is based on the size of the development and the sensitivity of the area.

BMPs required in the SWPP will effectively reduce or eliminate increased runoff volume while mitigating potential impacts to runoff water quality.

(b) Impacts Associated with Golf Course Operation. The project includes a new 18-hole golf course. Improper golf course design and management practices can cause runoff losses of nutrients and pesticide residues. Nitrogen and pesticide compounds may also leach through soil layers and contact

²⁷ Storm Water Quality Task Force, California, 1993, *California Storm Water Best Management Practice Handbooks: Municipal, Construction Activity and Industrial/Commercial*, March.

²⁸ Bay Area Stormwater Management Agencies Association, 1997, *Start at the Source, a Residential Site Planning & Design Guidance Manual for Stormwater Quality Protection*, January.

groundwater. Additionally, beneficial soil organisms, wildlife, and aquatic systems may be exposed to pesticides. The discussion of impacts is separated into (1) the potential runoff and leaching of nitrates and phosphorus, the basic compounds of turf grass fertilizer, and (2) the potential runoff and leaching of pesticides. Pesticides used on golf courses consist of herbicides, fungicides, and insecticides.

Nitrate Runoff and Leaching. Nitrogen-based fertilizers are used on golf courses to encourage turf grass growth and regeneration. Nitrates have been associated with several environmental problems including eutrophication, altering the productivity of natural ecosystems, and acid rain. The effects of nitrates on human health is also a concern. The U.S. Environmental Protection Agency (EPA) recommends the maximum concentration of 10 parts per million (ppm) of nitrates in drinking water. Larger concentrations have been known to cause birth defects, cancer, nervous system impairments and “blue baby” syndrome.

During heavy storms or excess irrigation where water does not percolate, nitrates may be carried off-site by runoff. Areas of turf grass that drain directly into sensitive drainages without berms or swales intercepting surface flows, or areas that are not buffered by native grasses or dense vegetation separating the maintained turf grass from the drainage way, may allow nitrates and phosphorus to enter the drainage by surface flow. However, proper grading and drainage and dense turf grass can reduce runoff to near zero for typical storm events. Turf grass has one of the lowest runoff coefficients (0.10 to 0.35) of any surface.²⁹

The leaching of nitrates into groundwater depends on the water solubility of the nitrogen-based fertilizer, the persistence of the fertilizer compound, the rate at which the nitrate-containing leachate percolates into the soil, and the depth to the groundwater table. Recent studies have shown that the leaching of nitrates and phosphorous compounds is minimized when the amount of applied irrigation water is equal to the evapotranspiration rate of the turf.^{30,31} Much of the nitrates and pesticides are taken up by the plant or reside in the dense thatch layer of healthy turf grass or root zone. The more persistent and water soluble the nitrogen-based fertilizer is, the greater likelihood the nitrates may percolate. Sandy soils tend to permit greater percolation while clay based soils inhibit leaching, but encourage greater runoff when the soil is saturated.

During germination and initial growth of the turf grass, fertilization is increased to encourage rapid germination and turf grass maturation. Fertilization may occur as frequent as once a month rather than once every two to four months for mature turf grass. During grow-in, more irrigation water is required to keep the seedbed wet to encourage full germination. Young turf grass shoots require frequent watering to avoid drying out. Also, until full germination and some maturation of the turf grass, near bare soil conditions exist. The above factors contribute to increased runoff and increased potential for nitrate and sediment runoff. This runoff, particularly siltation, could impact creeks and drainage channels if not controlled.

Pesticide Runoff and Leaching. Pesticide application can cause water quality impacts if pesticides are applied in areas which directly run off into sensitive drainages. The method by which pesticides run off into sensitive drainages is similar to that of nitrates discussed above. Pesticides are typi-

²⁹ Maidment, D.R., 1993, *Handbook of Hydrology*, McGraw Hill, Inc.

³⁰ Petrovic, 1990, op. cit.

³¹ Augustin, B.J., Synder, G.H., 1984, “Moisture Sensor-Controlled Irrigation for Reducing N Leaching Bermuda Grass Turf,” *Agronomy J.* 76.

cally applied less frequently than fertilizers, usually to specifically address pest problems as they become evident. Areas requiring the most intensive management, putting greens and tees, usually receive the greatest quantity of pest control. Tees and greens are usually sand-based encouraging percolation of rain water rather than runoff even in the largest storm events.

Any pesticide that is tightly adsorbed or bound to soil or organic matter is less likely to volatilize, leach, be degraded by microorganisms, or even be adsorbed by plants. Aside from organic matter, clay particles play the greatest role in retarding pesticide movement.³² The negatively-charged ions of chemical particles readily attach to the positively-charged ions found in clay. Most of the soils in the project site are high in clay content. The mobility of chemicals through the native soil will be limited by the relatively slow percolation rate of the soil and the ability of the clay-based soils to adsorb and bind the pesticide. Sand based greens and tees, however, offer the pesticide residues the opportunity to leach more quickly until they meet the native soil or are collected in subsurface drains.

Greens and tee areas are often underlain by drain lines that collect excess rain and irrigation water and transport it away from the green or tee basin. Leachate collected in subsurface drains usually discharges at grass swales or the irrigation storage lakes. Where leachate discharge points are adjacent to sensitive drainages or in swales close to drainages, leachate may enter the drainages. Dense turf grass helps deter the movement of leachate, encourages further percolation, and slows the movement of nitrates and pesticides through the soil.

Based on review of the Pleasanton Municipal Golf Course Concept 4, Scheme "E" plan (dated December 29, 1997 and illustrated in Appendix C, Figures 31 and 32), all golf holes except numbers 13 and 15 are designed so that greens and/or tees (the areas of most intense chemical and fertilizer application) are located relatively close to (within 100 feet of) creek channels. Discharge of drainage from green and tee areas to creeks without adequate treatment (i.e., flow through filtration media, such as thatch or grassy swale) could degrade quality of receiving waters.

Fifteen of the 18 golf holes are designed so that active golf play crosses creeks. Active golf play areas could affect water quality in creeks, since these areas typically require a higher level of maintenance (fertilizer and pesticide application) than rough or "out-of-bounds" areas. In addition, users of the course are more likely to interact directly with the creek channels when the creeks are in active play areas. Golf shots could routinely be made from within the creek channel, potentially disturbing riparian conditions and destabilizing the channel bottom.

Creek Channel Instability. Inspection of the project site indicates that some of the existing drainage channels, including the upper portion of Happy Valley Creek and its tributaries, are moderately incised. The incision has resulted in the creation of relatively steep banks (up to eight feet high), developed in highly erodible alluvial and colluvial sediments within the stream valleys. Nickpoints exist along the profile of some of the channel, suggesting probably headward migration incision. These portions of the stream channels are relatively unstable. The instability of these channels can result in significant erosion, bank failure, and sedimentation.

Under the preliminary grading plan for the Golf Course (the plan shown in Figure 31), approximately 75 percent of the length of identified existing creek channels within the golf course development area would be graded over and/or relocated. If properly designed, the grading and channel modification could result

³² Geron, 1993, op. cit.

in more stable channel geometry relative to existing conditions. Several of the creek segments, however, would be filled and relocated at a significantly higher elevation. Alteration of the gradient and elevation of the creek channels could exacerbate or initiate channel bed instability. Channel instability could result in excessive erosion and incision of creek channels into fills, potentially causing adverse sedimentation downstream.

Fourteen golf holes include golf cart path creek crossings. Improperly constructed crossings could result in golf carts' being operated within creek channels, destabilizing channel sediments and vegetation, potentially resulting in erosion and sedimentation.

As noted at the beginning of this drainage section, the Specific Plan requires the preparation and adoption of (1) a Golf Course Design and Management Plan and (2) a Water Quality Monitoring Plan before the Golf Course is constructed. Implementation of these plans, consistent with the specifications summarized above, will protect against adverse effects on water quality as a result of Golf Course operations.

4. Mitigation Measures

No significant adverse impacts on drainage have been identified; therefore, no mitigation measures are required.

H. GEOLOGY AND SOILS

1. Characteristics of the Project

Because the Plan Area is subject to geologic hazards, the Plan includes the following requirements:

- Individual development projects proposed within the Specific Plan Area shall be subject to preparation of a soils study as required by the Pleasanton General Plan (Public Safety Element, Policy 5). Design of such projects are required, under the Plan, to incorporate all recommendations of the City's consulting engineer.
- Purchasers of new residential units shall be provided, prior to occupancy, with a copy of an earthquake hazards information document that describes the potential for strong groundshaking at the site, potential effects of such groundshaking, and earthquake preparedness procedures.
- The developer shall prepare an earthquake preparedness and emergency response plan for each community use facility, including the proposed Golf Course clubhouse, prior to occupancy of new development permitted by the Specific Plan.
- For areas with slopes steeper than 20 percent or within or adjacent to existing landslides, a slope stability analysis (addressing static and pseudo-static conditions) shall be prepared by a licensed Civil Engineer and include the appropriate recommendations from the approved geotechnical report for any proposed residential development or roadway construction. These geotechnical reports shall provide recommendations for control of surface drainage, adequate groundwater drainage, and slide mass removal or stabilization, if necessary. The Specific Plan specifies that the analysis shall be supported by investigation of site-specific conditions that shall include but not be limited to:
 - estimated recency of slope failures and potential for continued movement;
 - depth of existing landslides or colluvial deposits and characterization of slide plane(s);
 - shear strength data for subsurface materials at the project site;
 - groundwater level data which characterizes seasonal fluctuations; and
 - justification of seismic coefficient used in pseudo-static analysis.

Proposed cut and fill slope designs shall have factors of safety not lower than 1.5 under static conditions and 1.0 under seismic shaking conditions.³³

- Grading plans and slope designs are subject to the following requirements:
 - All grading plans, cut and fill slopes, compaction procedures, and retaining structures shall be designed by a licensed geotechnical or civil engineer.
 - To the extent possible, (1) grading plans shall minimize earthmoving and site grading in areas of potential land instability, and (2) the development design shall avoid placing structures, and utilities on or near the tops of slopes or in the shallow subsurface of slopes.

³³ In the context of slope stability analysis, "factor of safety" describes numerically the ratio of forces that drive (cause) slope failure to the forces that resist failure.

Improvements proposed to be placed on slopes, or within ten feet of the tops of slopes, shall be approved for construction by a licensed Geotechnical Engineer or Certified Engineering Geologist.

- City shall approve grading plans and slope designs prior to implementation.
- All grading and slope preparation activities shall be conducted under the supervision of a licensed Geotechnical Engineer or Certified Engineering Geologist.
- In graded construction areas, replacement vegetation shall be planted as quickly as possible. Graded areas that remain inactive for ten days or more during the rainy season (October 1 to April 1) without permanent replanting should be hydroseeded or stabilized to inhibit dust.
- The final geotechnical report for the grading plan for proposed projects within the Specific Plan Area shall be prepared by a professional engineer and approved by the City of Pleasanton. The report shall address the potential for delayed consolidation within deep fills and associated land surface subsidence. The report shall provide specific recommendations for:
 - Fill compaction specifications that consider the likelihood of eventual saturation and wetting and drying cycles for the fill materials;
 - Removal of colluvial material or weathered rock that may be subject to consolidation under the load of proposed fills;
 - Design that minimizes the variability of fill thickness within fills that underlie structures or other improvements at the project site; and
 - Design and operation of adequate subsurface drainage systems for fills (particularly beneath heavily irrigated areas or other water sources such as swimming pools or detention basins). Drainage systems for the fills shall be designed to minimize maintenance and ensure long-term performance. Flow from the drainage system shall be controlled so as not to cause or contribute to erosion of existing drainage channels.
- On expansive soils, building foundations and improvements shall consist of drilled pier and grade beams, deepened footings (extending below expansive soil), or post-tensioned slabs. Alternatively, expansive soil shall be removed and replaced with compacted non-expansive soil prior to foundation construction. The Plan requires that subgrade soils for pavements consist of moisture-conditioned, lime-treated, or non-expansive soil, and that surface and subsurface water be directed away from foundation elements to minimize variations in soil moisture.

2. Setting

a. Geology

The project site is located within the Coast Range Geomorphic Province of California, a region characterized by northwest-southeast trending ranges of low mountains and intervening valleys. Large-scale folds and faults and related geologic structures carry a potential for seismic activity within this region, including the project site.

The middle portion of the site is dominated by the relatively flat topography of Happy Valley, running generally southeast to northwest at a gradient of approximately one to three percent through the approxi-

mate center of the site. The elevation is approximately 500 feet above mean sea level (msl) at the southeastern corner of the site, dropping to 360 feet msl at the northwestern corner.³⁴ The valley floor slopes up to 12 percent toward its outer edges.

The valley is flanked southwest and northeast by parallel ridges. The ridgetops are relatively narrow (several hundred feet wide) and slope gently to moderately (two to seven percent) toward the northwest. The northeastern ridge rises to elevation 863 feet; the southwestern ridge to approximately 600 feet. The slopes on the flanks of the ridges are relatively steep: 25 to 50 percent on the northeastern side and 30 to 40 percent on the southwestern side.

The ridges are underlain by alluvial sediments of the Livermore Gravels Formation (Figure 20). These unconsolidated sediments were deposited within the last few million years during the Pliocene epoch of the Tertiary Period and the Pleistocene epoch of the Quaternary Period (within the last five million years). The sediments are comprised of interbedded clay, silt, sand, and gravel deposits. The bedding of these deposits generally dips northeastwardly at angles between 15 to 20 degrees. On the Livermore Gravels Formation, slopes are mantled by a band of unconsolidated slope deposits (colluvium) that is generally thicker in the lower portions of the slopes and in the swales or colluvial hollows that represent the uppermost portions of the drainage systems developed on the slopes. Alluvial sediments shed from the ridges have been deposited along Happy Valley Creek and its tributaries.

b. Seismicity

The project site is located in the seismically active San Francisco Bay Region. The region is within the San Andreas Fault System (SAFS) which has developed along the boundary between the Pacific and North American lithospheric plates. Movement along this plate boundary causes the accumulation of strain within the earth's crust; sudden release of this strain causes earthquakes.

In general, the prominent fault zones within the SAFS are steeply-dipping to vertical, right-lateral, strike-slip faults. Among seismic sources within the SAFS (Figure 21), the San Andreas, Hayward, Rodgers Creek, Calaveras, Greenville, and Verona faults are capable of generating moderate to large earthquakes that could affect the project site. This area is within seismic risk Zone 4 of the Uniform Building Code (UBC).³⁵

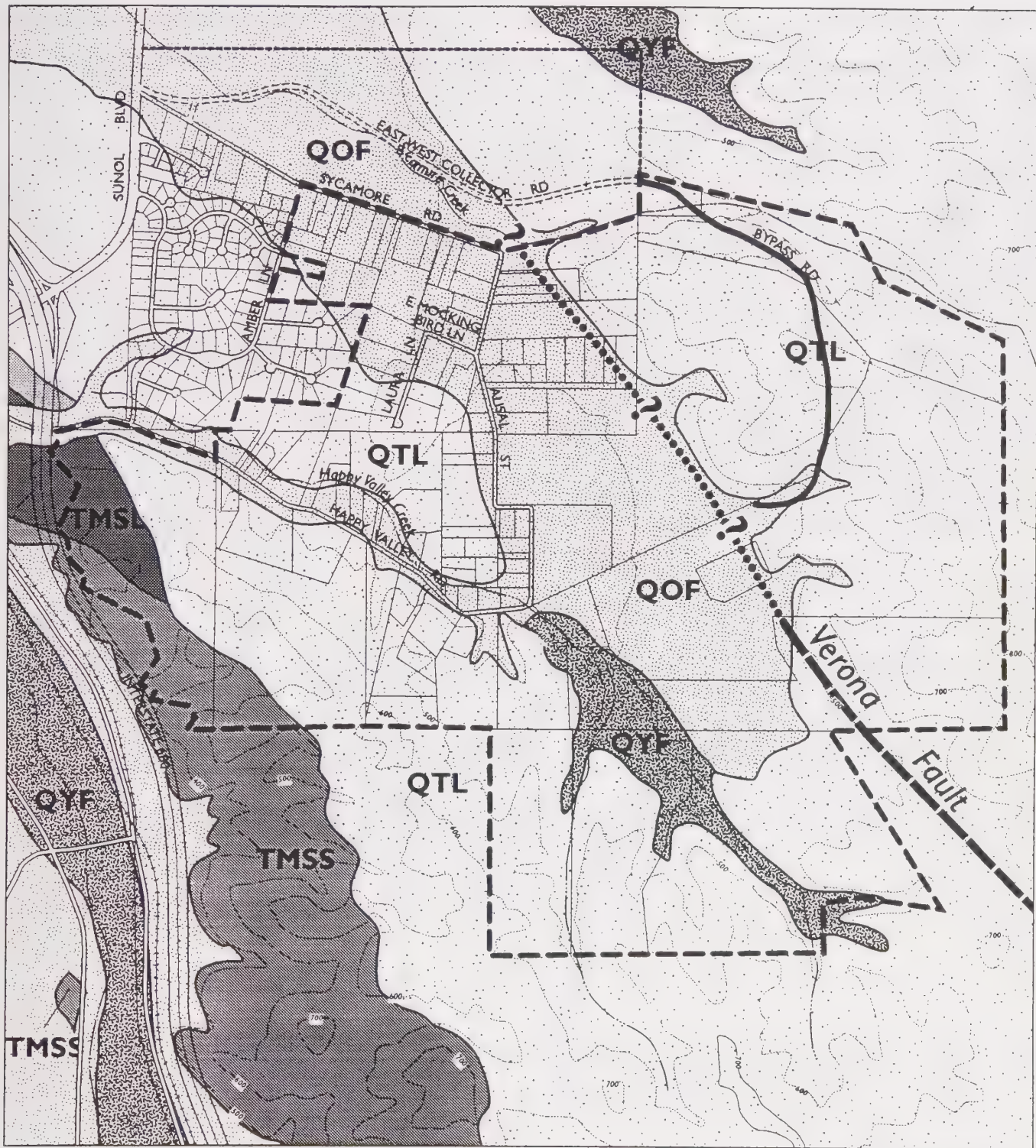
Recent seismic hazards evaluations have been conducted to determine probabilistic estimates for seismic shaking levels throughout California. The peak horizontal acceleration expected (that is, with a 10 percent chance of being exceeded in the next 50 years) from any of the seismic sources potentially affecting the subregion is estimated by the Federal Emergency Management Agency to be between 60 and 80 percent of gravity (0.6 to 0.8g).³⁶ The California Division of Mines and Geology (CDMG) estimates this peak acceleration to be greater than 0.7g.³⁷

³⁴ All elevation measurements are National Geodetic Vertical Datum of 1929 (NGVD).

³⁵ International Conference of Building Officials (ICBO), 1997, *Uniform Building Code*, Volumes 1 and 2.

³⁶ Federal Emergency Management Agency (FEMA), 1992, 1991 Edition NEHRP Recommended Provisions for Development of Seismic Regulations for New Buildings, Map 8 (1:1,500,000 scale).

³⁷ California Division of Mines and Geology (CDMG), 1996. *Probabilistic Seismic Hazard Map for California*, CDMG Open-File Report 96-08.



QYF Younger alluvial fan deposits

QOF Older alluvial fan deposits

QTL Livermore gravels

TMSL Marine sandstone

TMSS Marine siltstone

— • • • Fault (dashed where inferred, dotted where concealed)

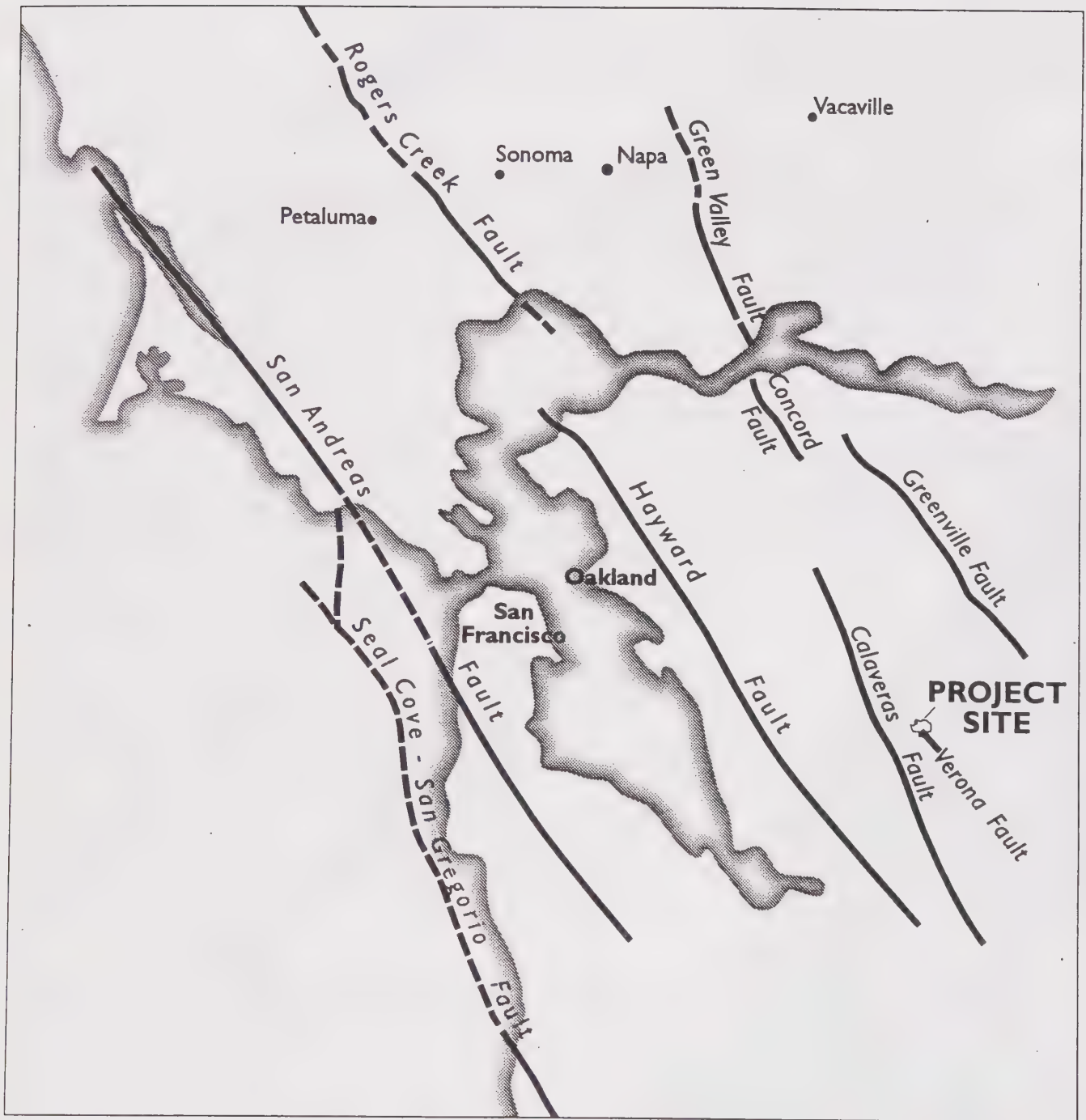


0 500 1000 2000
FEET

Figure 20

Source: City of Pleasanton, 1996, General Plan Update, Figure V-5.

Project Site Geology



Active Fault - dashed where inferred
 Fault has evidence of surface displacement
 within the last 11,000 years



0 5 10
MILES

Source: CDMG Special Publication 78

Figure 21
Regional Faults

The fault closest to the Plan Area is the Verona fault, which trends southeast-northwest through the eastern portion of the project site. CDMG considers this fault active, and an Alquist-Priolo Earthquake Fault Zone Map has been established for the fault³⁸ (Figure 22). The fault is approximately five miles long and is considered capable of generating a moment magnitude (Mw) 6.3 earthquake.³⁹ The intensity of seismic shaking at the project site during such an earthquake would be strong, estimated at 0.5 to 0.6 g.

Regional geologic mapping has generally shown the Verona fault to be concealed by recent alluvium at the project site.^{40,41} The fault was evaluated during subsurface investigations conducted in the central portion of the project site in 1990.⁴² The investigation, which included four trenches excavated across the mapped trace of the fault, did not identify evidence of faulting. The report for the investigation concluded that the potential for fault rupture within the area evaluated was not significant.

The active fault next closest to the project site is the Calaveras fault zone. This fault is generally divided into two segments, northern and southern. The northern segment (approximately 31 miles) extends northwestward from the Calaveras Reservoir in the south to near the town of Alamo, passing approximately 0.8 miles west of the western margin of the site. This segment is considered capable of generating a maximum moment magnitude (Mw) 6.8 earthquake. An estimated magnitude 5.6 earthquake in 1861 probably occurred on this segment of the Calaveras fault and probably generated strong groundshaking at the project site.⁴³

c. Soils

(1) Soil Types. Within the Plan Area, three general soil types and seven distinct mapping units have been identified (Figure 23). The soil mapping units and their characteristics are summarized in Table 23.

In general, the characteristics of soil reflect the influences of climate, biological activity, time, topography, and source material. The last two of these factors are the strongest influences at the project site.

The ridges and associated sideslopes at the project site contain Los Osos silty clay loam and Positas gravelly loam that are developed on the Livermore Gravel Formation sediments and the colluvium developed on those deposits. The valley bottom soils are identified as Rincon loam, Livermore, Pleasanton and Positas gravelly loam. These soils have formed on the alluvial deposits along Happy Valley Creek and adjacent colluvial deposits.

³⁸ California Division of Mines and Geology (CDMG), 1982, *Special Studies Zones, Livermore Quadrangle*.

³⁹ Wesnousky, S.G., 1986, *Earthquakes, Quaternary Faults, and Seismic Hazards in California*, Journal of Geophysical Research, Vol. 91, No. B12, pp. 12,587-12,631.

⁴⁰ Herd, D.G., 1977, Geologic Map of the Las Positas, Greenville, and Verona Faults, Eastern Alameda County, California, U.S. Geological Survey, Open-File Report No. 77-689.

⁴¹ Dibblee, T.W., Jr., 1980, Preliminary Geologic Map of the Livermore Quadrangle, Alameda and Contra Costa Counties, California, U.S. Geological Survey, Open-File Report 80-533B.

⁴² Terrasearch, Inc., 1990, Geologic/Seismic Investigation on Hogue Ranch, 1300 Happy Valley Road, Alameda County, California, prepared for J. Patrick Land Company, 13 p. + figures + appendices.

⁴³ Topozada, T.R., 1981, Preparation of Isoseismal Maps and Summaries of Reported Effects for Pre-1900 California Earthquakes, California Division of Mines and Geology, Open-File Report 81-11, 182 p.

Table 23
Soil Types

Symbol	Mapping Unit	Slope	Permeability	Shrink-Swell	Erosion Hazard	Capability Class
LaE2	Linne clay loam	30-45%	moderately slow	high	severe	Vle-5
Lg	Livermore gravelly loam	0-3%	moderately rapid	moderate to high	slight	IIs-4
LtF2	Los Osos silty clay loam	45-75%	moderately slow	high	very severe	VII3-5
PgB	Pleasanton gravelly loam	3-12%	moderately slow	moderate to high	slight to moderate	IIIs-3
PoC2	Positas gravelly loam	2-20%	very slow	moderate to high	slight to moderate	IVe-3
PoE2	Positas gravelly loam	40-40%	very slow	moderate to high	severe	Vle-3
PoF2	Positas gravelly loam	40-60%	very slow	moderate to high	very severe	VII3-3
Rc	Rincon loam	0-3%	slow	high	slight	IIs-3

Source: USDA, Soil Survey of the Alameda Area, California, 1966

(2) Erosion Hazards. The erosion hazard on the hillslopes is severe to very severe where runoff is rapid. The erosion hazard is slight to moderate on the valley floor.

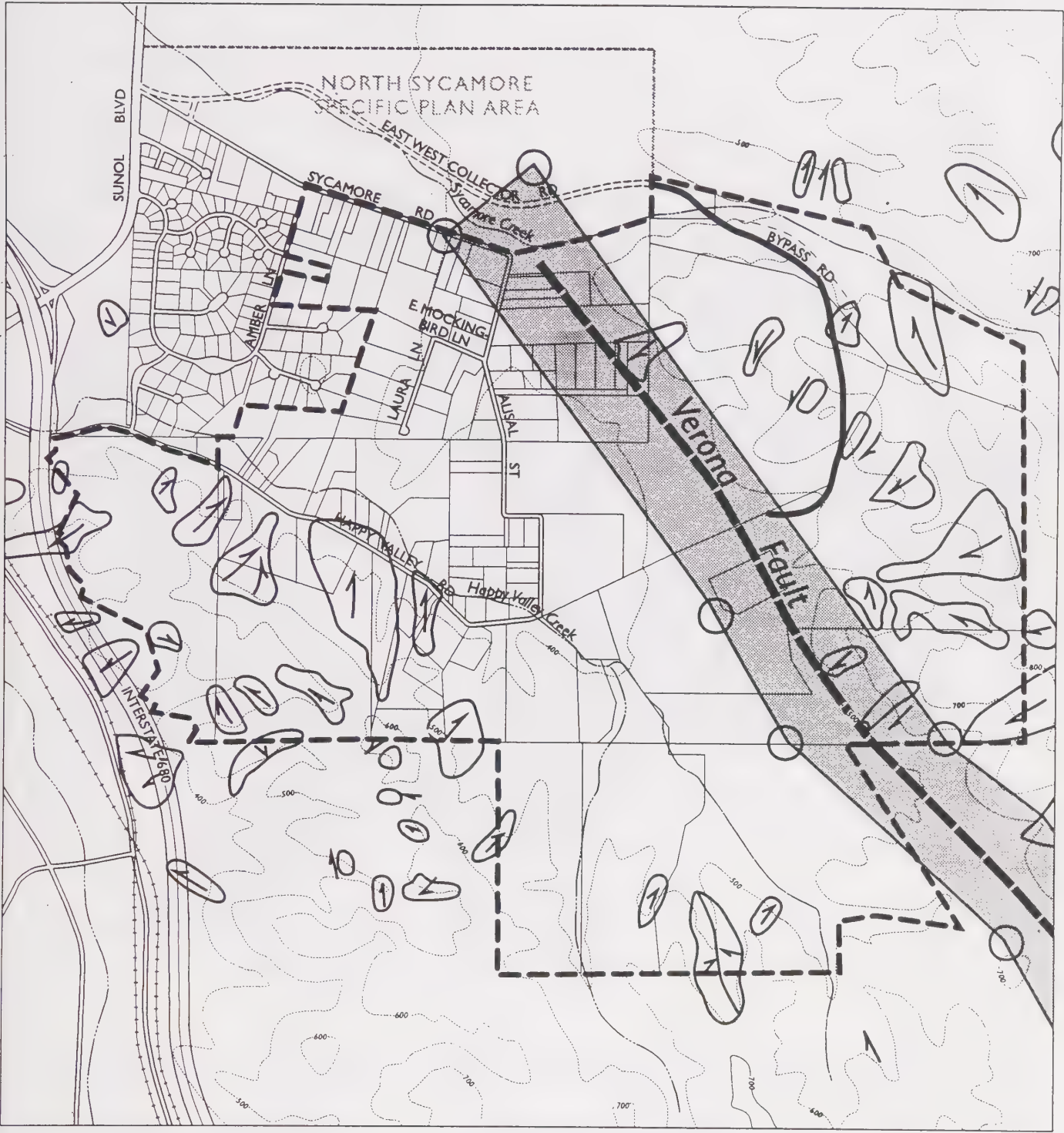
(3) Shrink-Swell Potential. The gravelly loams at the site have moderate to high shrink-swell potential (changes in soil volume resulting from changing moisture content) and the clayey loams have high shrink-swell potential. The permeability of the site soils is moderately slow to very slow except in the Livermore gravelly loam, where it is moderately rapid.

(4) Agricultural Capability. The agricultural capability of the hillside soils is severely to very severely limited (Capability Classes IV, VI, and VII) because the steep slopes have high runoff rates, severe erosion hazards, and shallow rooting depths. They are used primarily as pasture and range land.

Some of the valley soils have few limitations for agricultural use. In particular, Rincon loam and Livermore gravelly loam are identified as Capability Class II soils. These soils can be used for irrigated pasture, row crops, and grain. The Livermore gravelly loam, covering approximately 30 acres along Happy Valley Creek, is moderately limited by the coarse texture and excessive drainage of these soils.

The rooting depth of the Rincon loam (21 acres at the central portion of the project site) is shallow due to a dense clayey subsoil. This condition restricts the rooting depth of crops. Pleasanton gravelly loam covers approximately 108 acres of the project site within the middle portion of Happy Valley. This soil is classified as Capability Class III and has severe limitations for agriculture use due to a dense, clayey subsoil.

See Chapter 3, Part A for a discussion of prime farmland in the project area.



Younger Landslide - Shallow Individual Landslides
Active and Potentially Active

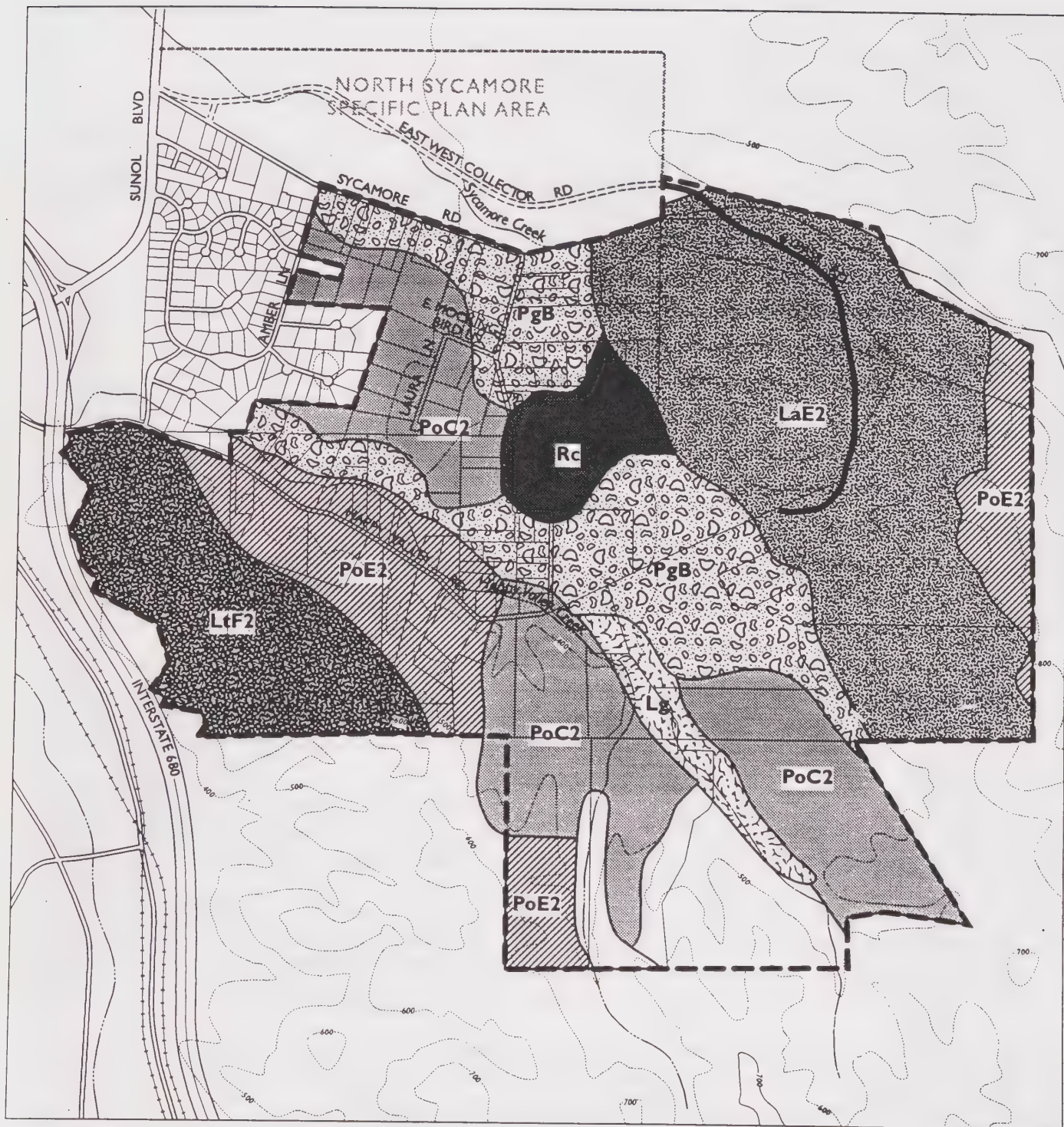


Alquist-Priolo Earthquake Fault Zone



Figure 22
**Project Site Landslides
and Fault Zone**

Source: City of Pleasanton, 1996, General Plan Update, Figure V-3



Soil Unit	Slope
LaE2	30-40%
Lg	—
LtF2	45-75%
PgB	3-12%
PoC2	2-20%
PoE2	20-40%
Rc	0-3%



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Source: City of Pleasanton, 1996, General Plan Update, Figure VII-1

Figure 23
Project Site Soils

d. Slope Stability

(1) Upland Areas. The General Plan characterizes site upland areas as having moderate susceptibility to landsliding and high susceptibility to erosion. Other regional slope stability evaluations⁴⁴ characterize these uplands as generally stable to marginally stable with some areas identified as unstable. The unstable areas include existing landslides and landslide deposits that have been identified during recent landslide mapping projects. The Plan Area was included in the 1984 landslide mapping for the City of Pleasanton General Plan update⁴⁵ and in 1991 by CDMG;⁴⁶ these studies were consistent in identifying the major landslide features at the project site (Figure 22). More detailed landslide mapping within the central portion of the site⁴⁷ also recognized the same general location for landslides within the area covered by that investigation.

Slope failures at the project site include relatively large (up to 17-acre) shallow rotational landslides. Visible headscarps (vertical or nearly vertical upper sections of slides) on some of the larger slides indicate recent or continued movement of the slide mass. Other slides do not have scarps and are dormant or inactive.

Numerous smaller shallow landslides have also been identified on the steeper slopes at the project site. These types of landslides are typical of slope failure classified as "debris flows." Debris flows reflect a compound process of formation of a shallow rotational slide ("soil slips") and moderate to rapid downslope transport (flow) of the slide mass. These types of failures are common in the moderate to steep topography within the San Francisco Bay region.

Debris flows usually develop within the unconsolidated slope deposits (colluvium) and are initiated during high rainfall events when groundwater levels are elevated. For example, in January, 1982, a series of severe rainstorms resulted in over 18,000 landslides in the Bay Area, most of which were debris flows.⁴⁸ Two debris flows potentially associated with this storm were identified at the project site.⁴⁹ Although these types of failures are relatively small as compared to deep-seated rotational landslides or earthflows, their occurrence can cause significant damage to structures at the failure location or within the path of the slide mass.

(2) Valley Areas. The General Plan characterizes slope instability on the valley floor as "nil to low."

⁴⁴ Nilson, T.H., Wright, R.H., Valsic, T.C., and Spangle, W.E., 1979, *Relative Slope Stability and Land-use Planning in the San Francisco Bay Region, California*, U.S. Geological Survey Professional Paper 944, 96 p. + maps.

⁴⁵ City of Pleasanton, 1984, *General Plan Update, Special Studies Zones and Landslides, Plate II, map (1:12,000 scale)*.

⁴⁶ Majmundar, H., 1991, *Landslide Hazards in the Livermore Valley and Vicinity, Alameda and Contra Costa Counties, California*, California Division of Mines and Geology, Open File Report 91-2, map (1:24,000 scale)

⁴⁷ Terrasearch, Inc., 1990, *op. cit.*

⁴⁸ Ellen, S.D. and Wiczorek, G.F., 1988, *Landslides, Floods, and Marine Effects of the Storm of January 3-5, 1982, in the San Francisco Bay Region, California*, U.S. Geological Survey Professional Paper 1434, 310 p. + maps.

⁴⁹ *Ibid.*, Plate 11.

3. Impacts

a. Significance Criteria

Exposure of people or structures to major geologic hazards is considered a significant effect under CEQA Guidelines. For purposes of this EIR, the potential for strong seismic shaking, fault rupture, or slope instability and the presence of deep fills and/or expansive soils are considered significant impacts.

b. Impacts

(1) Impacts Related to Seismic Hazards. The groundshaking at the site during the expected earthquakes on regional faults could cause structural and nonstructural damage to the proposed structures at the project site.

(a) Damage from Seismic Shaking. Although the damage by seismic shaking to structures built in compliance with the Uniform Building Code (UBC) requirements for seismic design would not be likely to cause collapse of the structures, the resulting structural damage could require significant repairs. Nonstructural damage should also be expected, possibly including breakage of windows, doors, piping, ducts, and light fixtures; collapse of walls, partitions, ceilings, and stairways; or damage to contents (such as appliances, computer equipment, and furnishings). Damage to nonstructural elements can account for the majority of a building's replacement cost following a major earthquake.

During moderate to strong groundshaking, saturated sediments can undergo a type of failure referred to as liquefaction. During liquefaction, elevated pore water pressures cause a complete and sudden loss of strength and the sediments are transformed from a solid to liquid state. In a liquid state, the sediments have no bearing capacity and can flow. The results of flow can include collapse or settlement of the ground surface. Significant damage or collapse of structures built in areas affected by liquefaction can occur.

The alluvial deposits within Happy Valley are recognized in the City's General Plan as having a high susceptibility to seismic shaking and "moderate to high" and "high" potential for liquefaction. The potential for associated impacts including lateral spreading, differential settlement, and lurch cracking is classed as "moderate to high" and "high." These impacts could result in substantial damage to building foundations or other site improvements. A similar potential for seismically-induced damage affects most areas within the San Francisco Bay region that are located near major active faults.

As noted above, the City of Pleasanton currently requires that all structures and constructed slopes be designed in accordance with the most recent UBC. To supplement this requirement, the Specific Plan includes the following requirements (described in more detail above in "Characteristics of the Project"):

- Developers of individual development projects proposed within the Specific Plan Area shall prepare a soils report and geotechnical report for all projects.
- Sellers of new residential units shall provide to all purchasers, prior to occupancy, an earthquake hazards information document that describes the potential for strong groundshaking at the site, potential effects of such groundshaking, and earthquake preparedness procedures.

- The applicant for each community use facility, including the proposed Golf Course clubhouse, shall prepare an earthquake preparedness and emergency response plan prior to occupancy of new development.

Development under the Specific Plan would result in the exposure of people to seismic hazards. This is a significant and unavoidable impact.

Impact H1. Exposure of area residents and Golf Course clubhouse visitors to seismic hazards that could cause structure damage to improvements and injury or loss of life to people.

The policies and programs of the General Plan and the requirements of the Specific Plan would reduce potential damage from seismic shaking to the greatest extent feasible. However, the potential for damage during strong seismic shaking cannot be eliminated.

(b) Damage from Fault Rupture. The Verona fault transects the project site (see Figure 22). This fault is identified as active under the Alquist-Priolo Earthquake Fault Zoning Act of 1972. Structures placed across the fault could be damaged by fault displacement during the expected moderate earthquake on the fault.

In general, the purpose of the Alquist-Priolo Act is to prevent the construction of structures that could be damaged by fault rupture. The Act requires that a geologic report defining and evaluating any hazard of fault rupture be prepared for any proposed subdivision of land that includes the eventual construction of structures for human occupancy within a designated Earthquake Fault Zone. The evaluation is to be prepared in accordance with the 1996 CDMG *Guidelines for Evaluating the Hazard of Surface Fault Rupture* and submitted to the City of Pleasanton for review and approval. This requirement mitigates the potential for damage resulting from fault rupture to a less-than-significant level.

(2) Impacts Related to Slope Stability. The steep slopes of the upland areas of the project site present the potential for landsliding that could adversely affect development within these areas. The slope failures that have been identified at the project site are predominantly shallow rotational landslides and debris flows. Under the proposed Specific Plan, most of the areas affected by slope stability problems would not be developed, avoiding significant impacts related to landsliding. Exceptions are:

- The site of the Medium Density Residential development in Subarea a. This site is located within one of the largest landslides identified at the project site. Continued downslope movement or settlement of this landslide mass could adversely affect structures or other improvements.
- The area along the south side of Happy Valley Road. This area lies downslope of six recognized slides. Continued movement of these failures could cause damage to structures within the path of their movement.

Protection against significant impacts related to fault rupture is provided by Specific Plan requirements calling for the preparation of a slope stability analysis (static and pseudo-static conditions) by a licensed Geotechnical Engineer, and inclusion of that analysis in the geotechnical report for any proposed residential development or roadway construction in areas with slopes steeper than 20 percent or within or adjacent to existing landslides. The specifications for this analysis are detailed above, in the

“Characteristics of the Project” portion of this section. With these requirements in place, the potential for damage resulting from slope movement is reduced to a less-than-significant level.

(3) Impacts Related to Deep Fills. The potential construction of large and deep fills (i.e., greater than 10 feet) could result in conditions that, over time, could affect the stability of the fills. Although the fills would be designed and constructed under the requirements of an approved grading plan, the potential for settlement of the fills and related subsidence of the land surface may occur in localized areas of the project site. Minor settlement of properly constructed deep fills may be caused by primary compression that would typically occur soon after construction. However, over the last 10 years, investigation of settlement of old deep fills has raised a concern among geotechnical professionals regarding the long-term performance of these features.^{50, 51}

Older deep fills appear to be susceptible to a phenomenon typically referred to as “hydrocompression.” Under this process, the water content in soils within the deeper portions of the fills increases through time and, ultimately, the soil becomes saturated. The source of water has been attributed to overwatering of landscaped areas, leaking water conveyance structures, and collection of groundwater. When these deeper portions of the fill become saturated, the compacted soil can lose strength and experience consolidation. In many cases this process will not occur until more than ten years after emplacement of the fill. This delayed consolidation can result in significant settlement of the ground surface. Such settlement can cause damage to structures, utilities, and pavements constructed on the fills.

To address this potential for damage resulting from soils conditions, the Specific Plan requires that the final geotechnical report for the grading plans for proposed projects within the Specific Plan Area be prepared by a professional engineer and submitted to the City for approval. The scope of the geotechnical report is detailed above, in the “Characteristics of the Project” portion of this section. Construction consistent with the recommendations of the geotechnical report will protect against significant impacts related to construction on fill, reducing this impact to the less-than significant level.

(4) Impacts Related to Expansive Soils. Expansive soils may swell and shrink with alternating cycles of wet and dry conditions. During these cycles, the volume of the soil changes significantly. Structural damage, warping and cracking of roads and sidewalks, and rupture of utility lines may occur if the potential movements of expansive soils are not considered during design and construction of improvements. This impact could damage development proposed by the project.

The Specific Plan contains specifications for foundation design and construction as well as the characteristics of subgrade soils. These specifications, described above in the “Characteristics of the Project” portion of this section, mitigate the potential for damage resulting from shrinking and swelling to a less-than-significant level.

⁵⁰ Brandon, T.L., Duncan, M., and Gardner, W.S., 1990, *Hydrocompaction Settlement of Deep Fills*, Journal of Geotechnical Engineering, Vol. 116, pp. 1536-1547.

⁵¹ Rodgers, J.D., 1991, *Long Term Behavior of Urban Fill Embankments*, presented at the University of California-Berkeley Symposium on Foundation Conditions, July 1991, 16 p.

4. Mitigation Measures

Impact H1. Exposure of area residents and Golf Course clubhouse visitors to seismic hazards that could cause structure damage to improvements and injury or loss of life to people.

Measure H1: None.

This impact cannot be mitigated if development of new housing and other structures (e.g., the Golf Course clubhouse) permitted by the Specific Plan project occurs.

Any development that occurs in the area must conform to the requirements of the General Plan and the Specific Plan as well as the Uniform Building Code and other applicable state and local seismic safety regulations. These requirements are intended to mitigate potential risk to development from seismic events to the maximum extent feasible based on current knowledge and technology.

Even with complete compliance with seismic safety policies and requirements, seismic risk to property and human life remains that cannot be fully mitigated.

All other potential impacts related to geologic and soils conditions would be mitigated to less-than-significant levels by (1) requirements that are already in place (e.g., construction conforming to the UBC) or (2) requirements included in the Specific Plan. No additional mitigation measures are required.

I. PUBLIC HEALTH AND SAFETY

1. Characteristics of the Project

Development within the Specific Plan area would allow for residential, recreational, agricultural, and open space uses of lands that have historically been used for agriculture and open space. To minimize the possibility of public health and safety impacts to construction workers or future site users that could result from the presence of hazardous materials⁵² in the Specific Plan Area (from current or historical land uses), the Specific Plan (Section V.B.8.d) includes the following requirements:

- Completion of a Phase I Environmental Site Assessment by a qualified environmental professional in accordance with the requirements of the American Society for Testing and Materials (ASTM, 1997) before construction of the Golf Course and Spotorno properties.
- Completion of a Phase II Environmental Site Assessment if the findings of the Phase I Environmental Site Assessment indicate the presence of, or potential for, use of hazardous materials in association with current or historical land uses. The Phase II Assessment, to ascertain whether past or current land uses have contributed to soil and groundwater contamination at the site, must be conducted by a qualified environmental professional. Soil and groundwater samples collected during the Phase II Assessment shall be submitted to a California-certified laboratory for analysis.
- Evaluation of the analytical results of the Phase II Assessment by a qualified environmental professional to determine whether chemicals could pose a hazard to future site users, construction workers, or the environment. If chemicals at the site could pose a hazard, a qualified professional shall conduct a risk assessment to quantify hazards based on soil and/or groundwater sampling results, and develop appropriate remediation measures, as necessary, to reduce potential risks for future site users to acceptable levels. Potential remediation measures may include, but not be limited to, soil removal, capping with an impermeable cover, soil vapor extraction, and groundwater remediation and/or monitoring. Regulatory agency oversight shall be obtained, as appropriate, from a local or State agency.
- Completion of an inventory of the interior areas of all on-site agricultural structures prior to their demolition. If hazardous materials are identified as being stored in these areas at that time, those materials shall be transported to and disposed of/recycled at an appropriate off-site facility.
- Monitoring by an environmental professional during the removal of the floors/foundations to determine if hazardous materials spills are present or suspected to have occurred in these areas. After demolition, a report by the environmental professional shall be submitted to the City delineating whether hazardous materials appeared to be present below the floors or foundations. If hazardous materials were present, a soil sampling plan shall be prepared and implemented prior to disturbance of native soils. The soil samples shall be collected by a qualified environmental professional and submitted to a California-certified laboratory for analysis. The analytical results shall be evaluated by a qualified environmental professional for development

⁵² A hazardous material is defined as any material, that because of its quantity, concentration, physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or the environment if released into the work place or environment, California Health and Safety Code, Chapter 6.95, Section 25500 et seq.

of an appropriate health and safety plan for construction workers involved in site demolition activities, waste disposal options, and potential site investigation/remediation.

- Preparation of a Spill and Pollution Prevention Plan, which must be prepared by the contractor(s) for each development project with soil disturbance (e.g., grading) of at least five acres. The Plan must (1) be prepared prior to the start of earthwork activities, (2) designate an onsite employee responsible for Plan implementation, and (3) include anticipated equipment needs and maintenance, emergency response procedures for hazardous materials releases, and procedures for contacting designated regulatory agencies in the event of a hazardous materials release.
- Removal of aboveground or underground fuel tanks in accordance with the requirements of the Livermore-Pleasanton Fire Department, if these are to be removed as part of development under the Specific Plan.
- Demolition of structures in accordance with applicable requirements of the California Department of Industrial Relations (Cal/OSHA)⁵³ for lead, with appropriate follow-up measures if lead-based paint is found.
- Demolition of structures in accordance with the requirements of Cal/OSHA and the Bay Area Air Quality Management District (BAAQMD) for asbestos, with appropriate follow-up measures if asbestos is found.
- Notification of the Underground Service Alert (USA) as well as site tenants prior to ground-breaking, to obtain information on the existing location of underground utilities.
- Contact with the Alameda County Mosquito Abatement District for assistance in controlling and managing potential disease-bearing vectors and their breeding areas (e.g., lakes, detention basins, springs) to reduce the potential for transmission of public health diseases associated with these organisms. This contact is to be made by the developer(s) of areas within the Specific Plan.

2. Setting

a. Past and Present Land Uses

Site visits of the Specific Plan area were conducted in May, 1997 and January, 1998. In addition, aerial photographs from 1957, 1959, 1968, 1990, and 1994 were reviewed to ascertain past and current land uses associated with possible hazardous materials use and storage which could have public health or environmental impacts (PAS, 1997). Past and current land uses include agricultural activities, orchards, ranching, maintenance of farm equipment, and underground and aboveground storage of fuels. Petroleum hydrocarbons, aromatic hydrocarbons, volatile organics, metals, pesticides, and herbicides may have been used as part of these land uses. Hazardous materials may also have been used in conjunction with these land uses, and these materials could have been released into the soil and groundwater in the Specific Plan area.

⁵³ The California Occupational Health and Safety Act (Cal/OSHA) is administered by the State Department of Industrial Relations, Division of Occupational Health and Safety.

b. Water on the Site

Seasonal open bodies of water are currently present on the site. Open bodies of water provide active breeding sites for mosquitoes and other disease-bearing organisms, potentially causing disease transmission. The Alameda County Mosquito Control District operates a county-wide program to control mosquitoes. The program includes inspection of areas where mosquitoes are likely to breed, and reducing these organisms using biological, chemical, and other control measures.

c. Land Uses in the Vicinity of the Project Site

The Specific Plan Area is located approximately one and one-half miles northwest of the General Electric Vallecitos Nuclear Center (GEVNC), a privately owned and operated research laboratory. Reactor operations at the site were discontinued more than ten years ago, and fuel and fueled experiments have been removed and shipped from GEVNC to ensure that the reactor cannot be operated (U.S. Nuclear Regulatory Commission, 1992a,b,c,d). As further described below, current Department of Energy (DOE) activities at the site are directed toward decontamination of two containment areas for irradiated components generated during DOE's previous operation of the reactor. These areas, which have been idle more than ten years, are Hot Cell Number 4 and an Emission Spectrograph Enclosure (a stainless steel glovebox that had been contaminated with transuranic⁵⁴ and low-level radioactive waste⁵⁵). DOE's mission is to clean up the hot cell and to decontaminate and dispose of the glovebox at an offsite facility. Following cleanup and restoration activities, General Electric will use the facility for commercial purposes (GEVNC, 1996).

The United States Nuclear Regulatory Commission (NRC) licenses and regulates nuclear-reactor operations and other activities involving the possession and use of nuclear materials, including transport and disposal of nuclear materials and wastes. The NRC also issues and enforces nuclear-material rules and regulations (NRC, undated). GEVNC is licensed by the NRC and the California Department of Health Services; the NRC license has been renewed to the year 2016 to possess, but not operate, the reactor. Permitting of GEVNC is subject to the National Environmental Policy Act (NEPA); an Environmental Assessment and Finding of No Significant Impact were prepared during the license renewal process. These documents analyzed GEVNC and determined that renewal of the license for possession would not have a significant effect on the quality of the human environment. In analyzing the safety of the facility for license renewal, the NRC found that there are no credible accidents that could result in the release of a significant amount of radioactive materials, and the extension of the possession-only license provides acceptable assurance that the public health and safety will be protected (NRC, 1992 a,b,c,d).

The reactor at the facility is no longer being used. Characterization and cleanup activities associated with contamination of portions of the facility with transuranic and low-level nuclear waste were expected to begin in 1997, and are projected to be completed by 2004. The decontamination approach will use the simplest and most passive methods first, advancing to more aggressive methods if needed. Surveillance, such as air monitoring, will be conducted during these activities to ensure no off-site releases. General Electric also has a pollution control and prevention program that will be implemented during decontami-

⁵⁴ Transuranic wastes are wastes that are contaminated with alpha-emitting radionuclides (elements 93 and higher) with half-lives greater than 20 years and concentrations greater than 100 nCi/g. Radium sources and Uranium-232 are also considered to be transuranic wastes (LBL, not dated).

⁵⁵ Low level waste is waste containing radioactivity that is not classified as high-level waste, transuranic waste, or uranium mill tailings (IEER, 1996).

nation and cleanup activities (GEVNC, 1996). Regulation of these activities by the California Department of Toxic Substance Control (DTSC) and the U.S. Environmental Protection Agency (EPA) would minimize potential impacts of decontamination and cleanup on water resources.

Further, the GEVNC facilities are located within Vallecitos Valley, a southward-draining valley separated from Happy Valley by a drainage divide. The uppermost aquifer at GEVNC is within the alluvial fill of Vallecitos Valley and is, therefore, also separated from the shallow groundwater within Happy Valley. Due to the separation of surface and subsurface water resources, it is unlikely that water resources within Happy Valley would be adversely affected by any water quality degradation that may occur at the GEVNC.

3. Impacts

a. Significance Criteria

An impact to public health and safety for the Specific Plan area would be considered significant if it:

- Involves a risk of accidental explosion or release of hazardous substances, including, but not limited to oil, pesticides, chemicals, or radiation;
- Creates a health hazard or potential health hazard; or
- Exposes people to existing sources of potential health hazards.

b. Impacts

(1) Impacts Related to Past Land Uses on the Site.

(a) *Exposure to Chemicals.* The chemicals identified as potentially used in association with past land uses on the site (petroleum hydrocarbons, aromatic hydrocarbons, volatile organics, metals, pesticides, and herbicides) could present a health risk to workers involved in site development activities and future site and offsite users if the chemicals had been released to soil and groundwater. Many of these chemicals are known to cause immediate health effects, following acute exposure, as well as carcinogenic and non-carcinogenic effects, following chronic exposure.

As noted in "Characteristics of the Project," above, the Specific Plan requires:

- A Phase I Environmental Site Assessment.
- A Phase II Environmental Site Assessment, if appropriate, and additional measures as indicated by the Phase II assessment.
- Inventories of the interior areas of all on-site agricultural structures prior to demolition; transportation to and disposal/recycling of any discovered hazardous materials at an appropriate off-site facility.
- Monitoring of removal of the floors/foundations to determine if hazardous materials spills are present or suspected to have occurred in these areas, with appropriate follow-up measures.

These measures will protect against significant impacts resulting from exposure to chemicals that may remain on the site from previous land uses.

(b) *Exposure to Lead-based Paint.* Many of the buildings within the Specific Plan area were constructed before 1957, the date of the earliest aerial photograph available for review. The structures may have been painted with lead-based paint, which could be a health hazard for workers involved in demolition activities. Lead can cause adverse health effects including high blood pressure, digestive problems, nerve disorders, memory and concentration problems, and other effects (U.S. EPA, 1995); lead is also a suspected carcinogen and known teratogen. There are specific Federal and State requirements pertaining to the demolition of structures where lead or materials containing lead are present [29 Code of Federal Regulations (CFR), Part 1926.62; Title 8, California Code of Regulations (CCR), Section 1532.1].

The Specific Plan requires that demolition of structures take place in accordance with applicable Cal/OSHA standards for lead, with appropriate follow-up measures if lead-based paint is found.

(c) *Exposure to Asbestos.* Many of the buildings within the Specific Plan area were constructed before 1957, and may incorporate asbestos-containing material. Asbestos is a known occupational carcinogen. Federal, State, and local requirements regulate the removal of asbestos or suspect asbestos-containing material, including the demolition of structures where asbestos is present; appropriate containment, worker training, reporting, and disposal are required (29 CFR Part 1926.1101; 40 CFR Part 61 and 152; Title 8, CCR, Section 1529; BAAQMD, Regulations, Rule 2).

The Specific Plan also requires that demolition of structures take place in accordance with applicable Cal/OSHA and BAAQMD standards for asbestos, with appropriate follow-up measures if asbestos is found.

(d) *Hazards Related to Underground and Aboveground Utilities and Structures.* Historical and current land uses within the Specific Plan area may have involved the use of underground and aboveground tanks for vehicle maintenance, fueling, and residential heating (e.g., propane). Additional underground utilities may occur within the Specific Plan area, including water, sanitary sewer systems, phone, and gas. Underground and aboveground structures could be damaged during demolition and development activities; if compromised, they could create a potential hazard for construction workers and the public.

The Specific Plan calls for contact with the Underground Service Alert (USA), as required by California Government Code Section 4216, as well as with site tenants to identify the location(s) of underground utilities and structures prior to demolition and site development activities. If aboveground and/or underground fuel tanks are to be removed, they shall be removed in accordance with the requirements of the Livermore-Pleasanton Fire Department by qualified personnel. These procedures will reduce the danger from encounters with such facilities to a less-than-significant level.

(2) *Impacts Related to Land Uses on the Site After Development.* The encephalitis virus and other vector-borne diseases such as malaria can be transmitted by mosquitoes. A vector is any animal that transmits parasitic microorganisms, and therefore the diseases that they cause, from person to person, or from infected animals to human beings. Encephalitis is an inflammation of the brain which can be caused by a bacterial or viral infection. Malaria is an infectious disease due to the presence of parasitic protozoa of the genus *Plasmodium* within the red blood cells (Market House Books, Ltd., 1990). There are no vaccines or specific treatments for human cases of encephalitis (Waletzko, 1996); treatment is available for malaria. Stagnant water, typically found in reservoirs, creeks, ditches, and temporary rainwater ponds can be used as breeding areas for mosquitoes.

The Alameda County Mosquito Abatement District (ACMAD) inspects and treats areas in Pleasanton to reduce the number of mosquitoes, and thus the potential for transmission of vector-borne public health diseases (Rusmisl, 1997). ACMAD also has a sentinel program to monitor for mosquito-borne encephalitis and conducts follow-up activities to prevent transmission of malaria by mosquitoes in Alameda County. The sentinel program has had no recent detections of mosquito-borne encephalitis. Another measure to reduce potential mosquito breeding areas is through proper construction of water retention areas (Rusmisl, 1997).

The project will include the development of ponds and stormwater detention basins on the Golf Course and stormwater detention basins on the Spotorno property, and will attract additional people to residential areas near seasonal sources of water. Water sources, such as lakes, detention basins, and springs, can provide active breeding sites for mosquitoes and other disease-bearing organisms, potentially causing an environmental nuisance problem and disease transmission.

As noted in “Characteristics of the Project,” above, the Specific Plan requires developer(s) of areas within the Specific Plan to contact the Alameda County Mosquito Abatement District for assistance in controlling and managing potential disease-bearing vectors and their breeding areas. This procedure will reduce the potential for transmission of public health diseases associated with these organisms.

(3) Impacts Related to Proximity of the Vallecitos Nuclear Center. As noted in the “Setting” section, above, the NRC found, during its safety analysis of the facility for license renewal that there are no credible accidents that could result in the release of a significant amount of radioactive materials, and the extension of the possession-only license provides acceptable assurance that the public health and safety will be protected. A potential accidental release from the site therefore would have a less-than-significant impact on the public health and safety of site users within the Specific Plan Area.

(4) Impacts Related to Use of Hazardous Materials on the Proposed Golf Course. Proposed development of a golf course within the Specific Plan Area could increase the volume and types of hazardous materials transported, stored, and used on-site. Hazardous materials could also be stored in aboveground or underground storage tanks.

Numerous local, State, and Federal statutes and regulations pertain to the proper transport, use, storage and disposal of hazardous materials and wastes. Regulations also pertain to the use and application of pesticides and herbicides. The Golf Course would have specific requirements pertaining to the transport, use, storage, handling, disposal, and permitting of hazardous materials (including pesticides), and associated worker training requirements.

Enforcement of the applicable statutes and regulations will protect against significant hazardous materials impacts resulting from project development and operation.

(5) Impacts During Construction. Site preparation and project construction would be conducted using diesel-powered equipment. It is possible that the fueling and maintenance of this equipment would be undertaken on the site. Fueling and vehicle maintenance may involve the use of diesel, motor oils, lubricants, and other hazardous materials. Also, hazardous materials (e.g., paints, curing agents) would be brought into the Specific Plan Area during site construction activities. Transport, storage, or handling of these materials may result in release of hazardous materials to the environment.

The Specific Plan requires preparation of a Spill and Pollution Prevention Plan for each development project with soil disturbance (e.g., grading of at least five acres) to mitigate against adverse impacts related to incidents involving hazardous materials during construction.

4. Mitigation Measures

Specific Plan regulation of planning, demolition, and construction activities would reduce potential impacts related to hazardous materials to a less-than-significant level. Therefore, no mitigation measures are needed.

J. BIOLOGY

1. Characteristics of the Project

The Specific Plan incorporates several requirements that are intended to avoid adverse impacts on biological resources in the Plan Area. The City of Pleasanton will be responsible for assuring compliance with all of these requirements:

- Preparation of a California Tiger Salamander Mitigation and Monitoring Plan, and submittal of that Plan to DFG for review and approval. Approval of the plan must be obtained from DFG prior to the issuance of any grading permits that affect tiger salamander habitat.
- Preparation of a mitigation plan for California red-legged frog in consultation with the U.S. Fish & Wildlife Service (USF&WS) in support of a Section 7 Consultation. The mitigation plan must be submitted to the U.S. Army Corps of Engineers (Corps) as part of the Section 404 permit process. A Biological Opinion must be obtained from USF&WS prior to the issuance of any grading permits that affect Red-legged frog habitat.
- Completion of a preconstruction survey of the Spotorno residential development areas (Spotorno Flat and Upper Valley), Golf Course, and Golf Course Housing areas prior to the start of construction activities, to verify the presence or absence of active raptor nests. If any active nests are found, construction must be scheduled so that it will not result in removal or abandonment of an active raptor nest.
- If construction will affect Pond 3 (located in the hills east of the Spotorno Flat Area; see Figure 25, p. 119), completion of a preconstruction survey of the pond to verify the presence or absence of active Tricolored blackbird nests.
- Setbacks for all development, including residential uses and trails, of at least 100 feet from the centerline of Sycamore Creek, or at least 10 feet from the outermost drip line of the existing riparian woodland, whichever is greater.
- Consultation with DFG in any areas subject to their jurisdiction prior to any encroachment into a designated corridor, and/or consultation with the Corps prior to any activity that would occur within the jurisdictional limits of wetlands or within the bed and bank of a waters of the U.S.
- Appropriate permits and/or agreements from regulatory agencies (DFG, USF&WS, and/or Corps) prior to realignment of Happy Valley Creek or encroachment into the buffer zone of Sycamore Creek, as defined above.
- Preparation and approval of a Riparian Restoration Plan prior to approval of a grading plan for the Project Area. The riparian restoration plan must discuss anticipated impacts and proposed mitigation measures associated with the proposed realignment of Happy Valley Creek and any other affected riparian corridors in the project area subject to the jurisdiction of DFG and/or the Corps. The plan will be used to support applications for permits from DFG and the Corps.
- Preparation and approval of a Master Landscape Plan and a Tree Preservation Plan prior to the approval of a grading plan for the project area. Requirements for these plans are summarized in the “Impacts” section, below, in the discussion of heritage trees.

2. Setting

This section was adapted from three technical reports prepared by Sycamore Environmental Consultants. These reports are (1) the *Biological Resources Evaluation and Jurisdictional Delineation Report for Happy Valley Specific Plan EIR*, July 1997(a), (2) the *Site Assessment Report for California red-legged frog*, July 1997(b), and (3) the *Tree Survey and Arborist Report*, July 1997(c) (full citations in Chapter 8).

The Specific Plan area is located within the Fremont-Livermore hills of the Central California Coast Range. The climate of the region is primarily dry Mediterranean, favoring valley grassland and oak woodland habitats. The topography of the area ranges in elevation from 400 feet to over 700 feet. The project area is defined by two intermittent stream drainages and their associated landforms. Much of the project study area is managed as grazing land. Built elements in the project study area include a church, houses, barns, fences, creek culverts, and stock ponds.

The study area for this biological resources evaluation (including a jurisdictional wetlands report) consisted of about 450 acres located within the 860-acre area Happy Valley Specific Plan EIR study area. The arborist report study area concentrated on this same 450 acre project study area. The biological resources study area is mapped in Figure 24. The area excluded from the biological resources study area is either (1) designated for open space, and not expected to be significantly affected by development that would be permitted by the Specific Plan or (2) within the substantially-developed inner Happy Valley area, where future development would be subject to subsequent environmental review consistent with City policy on new residential construction.⁵⁶

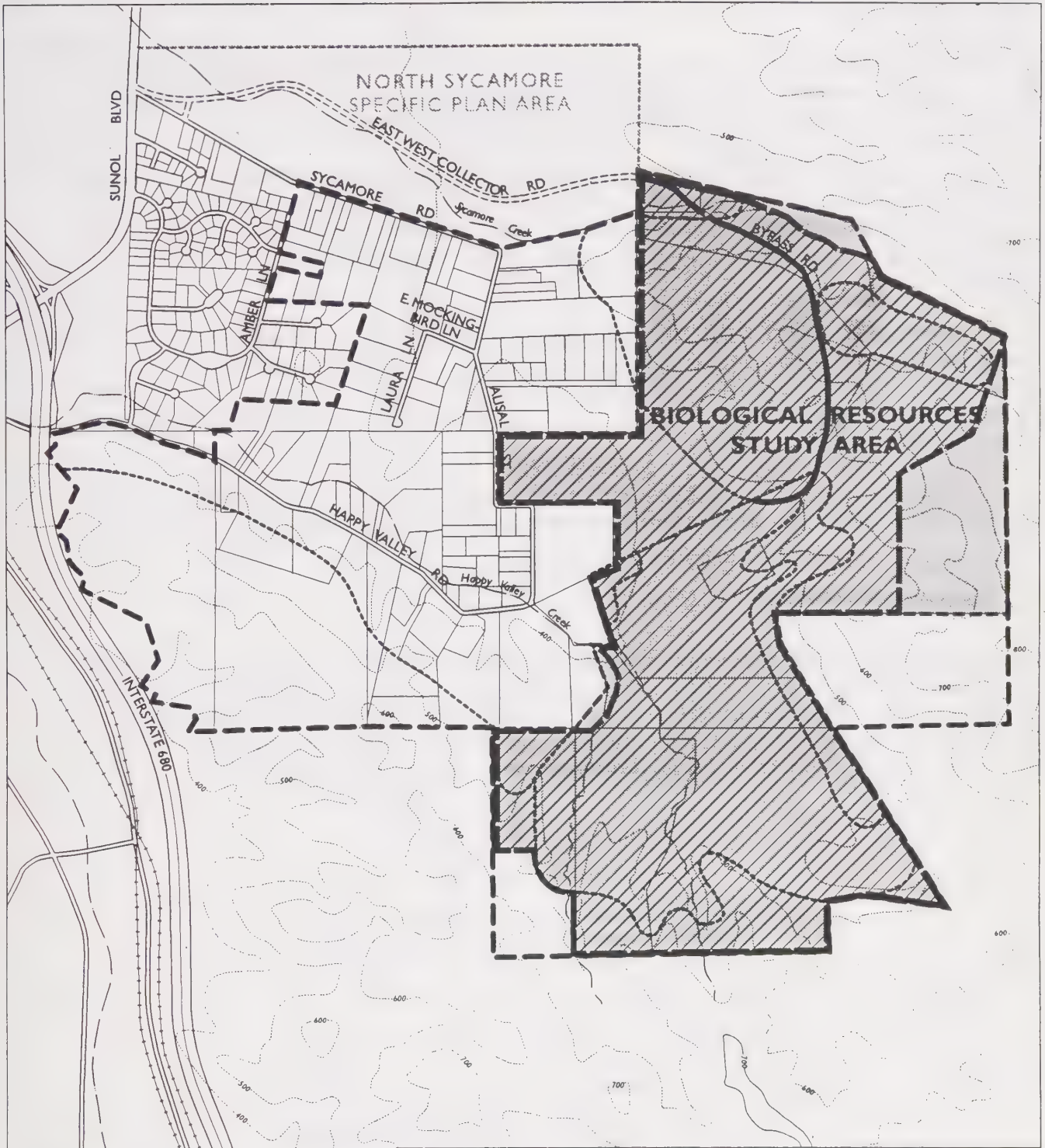
a. Introduction and Methodology

(1) Literature Review. A comprehensive list of all state- and federally-listed species and species of special concern that occur, or could potentially occur in the proposed project study area was developed from (1) a review of current lists prepared by the California Department of Fish and Game (DFG) Natural Diversity Data Base identifying special status species, (2) a computerized search of the California Natural Diversity Data Base (CNDDDB/RareFind⁵⁷ report, March 3, 1997) for the La Costa Valley and Livermore USGS topographic quadrangles, and (3) a letter from the U.S. Fish and Wildlife Service, Ecological Services, Sacramento Field Office, summarizing current file data on special-status species that could occur in the project vicinity. The complete list of these species is presented in Table 25 (p. 122).

Information on the biology, distribution, taxonomy, legal status, and other aspects of the special-status species was obtained from documents on file in the library of Sycamore Environmental.

⁵⁶ As noted in Chapter 2, the City of Pleasanton does not normally require environmental review of single-family projects containing fewer than five lots. Construction of new homes would, however, be subject to City, County, State, and federal regulations that address the disturbance of special-status species habitats, jurisdictional wetlands, and waters of the U.S.

⁵⁷ CNDDDB is the California Natural Diversity Data Base.



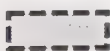

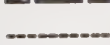
-  Biological Resources Study Area
-  Heritage Tree Survey Area
-  Land Use Sub Area



Figure 24

Biological Resources and Arborist Study Areas

Source: Sycamore Environmental Consultants

(2) *Field Surveys.* Field surveys of the proposed project area were conducted in May, June, and July, 1997 to determine the area's existing plant and wildlife species, the presence or potential occurrence of special status species, and the extent of jurisdictional wetlands and waters of the U.S.

Detailed botanical and wildlife surveys were conducted during May and June 1997 (Sycamore Environmental, 1997(a)). All identifiable plant species observed were recorded and the major plant communities were identified and mapped. All wildlife taxa observed, in addition to physical evidence of their presence (tracks, burrows, potential roosting sites, nests, scats, vocalizations, etc.), were identified and recorded.

During June and July, 1997, a California red-legged frog site assessment was conducted in accordance with U.S. Fish and Wildlife guidelines (Sycamore Environmental, 1997(b)). Field surveys were conducted for California tiger salamander during May and June, 1997 (outside the optimal survey window for this species, which is November through March); in addition, a field meeting with DFG was conducted in December, 1997.

A survey of native trees at least 6 inches in diameter at breast height (dbh) was also conducted in June and July, 1997. Trees, including heritage trees, were mapped and described in the Tree Survey and Arborist Report (Sycamore Environmental, 1997(c)).

b. Existing Conditions

(1) *Vegetation and Habitats.* The major plant communities and wildlife habitat types occurring in the project study area include agricultural fields, nonnative annual grasslands, oak woodland/riparian woodland, and wetlands and channels (Figure 25). Community description names are from Holland (1986) and Sawyer and Keeler-Wolf (1995). A small stand of native bunchgrass community also occurs in the study area. Table 24 presents the acres of major habitat types occurring within the project study area.

Table 24
Acres of Major Habitat Types

Major Habitat Types	Acres*
Agricultural land	27
Nonnative annual grasslands	394
Nodding needlegrass community	2.2
Oak woodland/Riparian	21
Wetlands and Channels	6.44
Total	450

* Details do not agree with total because measurement of larger, non-sensitive habitat areas is approximate.

Source: Sycamore Environmental Consultants, Inc.

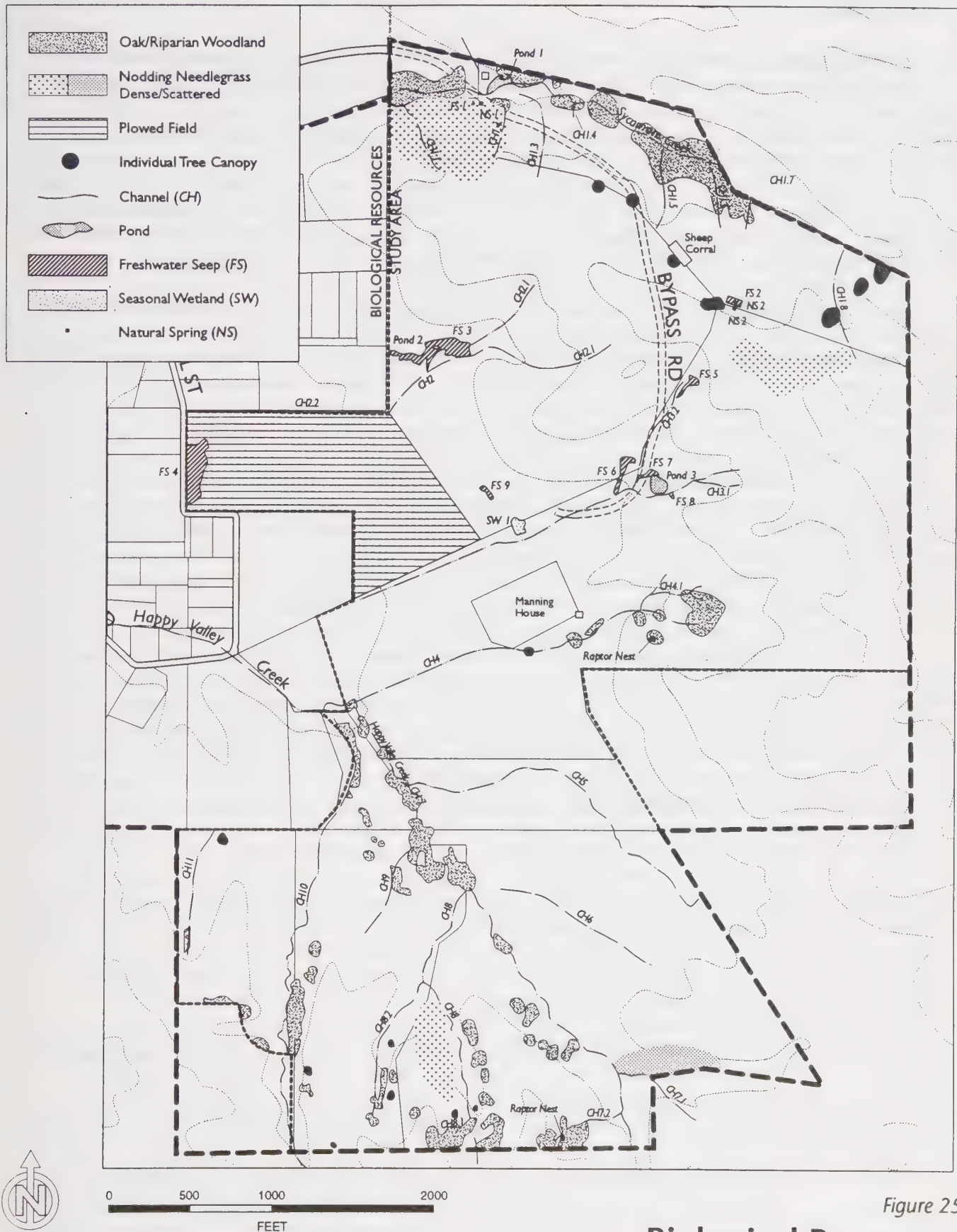


Figure 25

Biological Resources

Source: Sycamore Environmental Consultants, Inc.

(a) **Agricultural Land.** Open grassland habitats in the study area that are regularly plowed and used for crop production were mapped as agricultural land. This habitat type accounts for about 27 acres of the study area. Plowed fields were most evident in the Spotorno Flat Area. Vegetation in that area consists of mostly non-native annual and perennial grasses and herbaceous plants such as Birdfoot trefoil (scientific names in Table 25).

(b) **Nonnative Grasslands.** The majority (391 acres) of the 450-acre study area consists of annual grasslands. Common grass species in these habitats include Annual beard grass, Annual ryegrass, Barley, Barbed goatgrass, Medusa-head grass, Oats, Soft chess, and Vulpia (scientific names in Table 25).

(c) **Nodding Needlegrass Community.** A small community of Nodding needlegrass (scientific names in Table 25) occurs on a south-facing bluff above CH 7-1 (channel mapped in Figure 26, p. 128) in the southeastern portion of the study area. This species is a native perennial bunchgrass. Although heavily grazed by cattle, this community continues to survive. Nodding needlegrass plants occur in many other locations in the study area intermixed with the community mapped as non-native annual grasslands.

(d) **Oak Woodland/Riparian Woodland.** Oak woodland/riparian woodland vegetation occurs in several areas in the project study area, including steep east- and west-facing ridge slopes and along the lower reaches of Happy Valley Creek and along the length of Sycamore Creek. This habitat type accounts for approximately 21 acres of the project study area. The riparian woodland along these two major creeks is dominated by Valley oak, with Blue oak, Northern California black walnut, California buckeye, and Western sycamore interspersed in the riparian corridor (scientific names in Table 25).

(e) **Wetlands and Creeks.** Wetlands, such as freshwater seeps, seasonal wetlands, and natural springs, occur within the project study area. A total of nine freshwater seeps, one seasonal wetland, and two natural springs were mapped in the study area. Native species found in these habitats include Baltic rush and Spikerush. Non-native species include Annual ryegrass, Dock, Curly dock, and Birdfoot trefoil. Ten creeks that are defined as “waters of the U.S.” (see pp. 127-129) occur in the study area; the most important of these are Sycamore Creek, on the north side of the Study Area, and Happy Valley Creek, on the south side. (These two creeks are described in more detail on p. 129.)

(f) **Heritage Trees.** A total of 406 trees with a 6-inch diameter at breast height (dbh) or greater were identified in the project study area. Of these, 329 trees (81 percent) meet the City’s heritage tree definition and 77 do not. The Tree Survey and Arborist Report discusses the City’s criteria for heritage trees and these results in greater detail (Sycamore Environmental, 1997(c)).

(2) Wildlife. Prominent wildlife habitats in the project study area include annual grassland, oak woodland, riparian woodland, agricultural fields, and wetlands.

(a) **Annual Grassland Habitat.** The annual grassland is comprised mostly of grazed rangeland and provides foraging habitat for a wide variety of animal species including Black-tailed jackrabbit, Botta’s pocket gopher, California ground squirrel, Golden eagle, Turkey vulture, Red-tailed hawk, American kestrel, and Western meadowlark (scientific names of species observed are in Table 25).

(b) **Oak Woodland/Riparian Woodland Habitats.** The oak woodland/riparian woodland habitats along Happy Valley and Sycamore creeks provide nesting and foraging habitat for numerous bird species including Acorn and Nuttall’s woodpeckers, Bewick’s wren, Black phoebe, Western bluebird, European

starling, California towhee, California quail, Violet-green swallow, Scrub jay, Red-shouldered hawk, and Yellow-billed magpie. Mule deer and Gopher snake also use the riparian corridors along these creeks.

(c) ***Agricultural Fields Habitat.*** The agricultural fields provide foraging habitat for a variety of bird species such as Brewer's blackbirds and Brown-headed cowbirds. Wildlife species observed in wetland habitats in the project study area include Bullfrog, Pacific chorus frog, Killdeer, Mallard, and Red-winged blackbird.

(d) ***Wetlands Habitat.*** An active red-tailed hawk nest is believed to be located in a large oak tree on a hillside bordering a channel tributary of Happy Valley Creek. This finding is based on observations of two red-tailed hawks that continually circled and called during the survey of the study area.

In addition, red-shouldered hawks were observed along the main channel of Happy Valley Creek. A nest of this species was not located, however.

(3) ***Aquatic Resources.*** Within the study area, only Happy Valley and Sycamore creeks are large enough to support aquatic species. The only fish species observed in Sycamore Creek were minnows. Due to the lower water levels (one to three inches) during summer months, it is unlikely that fish species larger than minnows are resident in Sycamore Creek. No fish were observed in Happy Valley Creek. Happy Valley Creek is dry throughout most of the spring and summer and is not likely to support resident fishes.

Pacific chorus frog tadpoles were observed in Happy Valley Creek near the southern boundary of the study area. Large numbers of these tadpoles were also observed in Pond 1 in May and June. In Sycamore Creek below the pond, Western toad tadpoles were found in several locations in May, but none were observed in June. Adult Bullfrogs were heard and observed in Pond 3.

c. Jurisdiction and Regulatory Requirements

(1) ***Special-Status Species.*** The CNDDDB/RareFind report and data received from the Service were reviewed to determine special-status wildlife and plant species that could occur in the project study area. Table 25 presents the list of species evaluated for the presence of suitable habitat within the project study area.

The Biological Resources Evaluation includes a detailed discussion on habitat, biology, range, and occurrence records for the special-status species for which suitable or marginal habitat is present, and whose known range includes or is near the study area. (Sycamore Environmental, 1997(a)).

(a) ***Plant Taxa of Concern.*** No special-status plant taxa were observed during the May, June, and July, 1997 field surveys. Caper-fruited tropidocarpum, a federal species of concern for which marginal habitat exists within the project area, was not observed and is not believed to occur in the project area.

The Valley oaks and Blue oaks occurring in the oak woodlands and riparian woodlands have no legal protective status under the provisions of CEQA or the state or federal Endangered Species Acts. The Northern California black walnuts occurring in the riparian woodlands are federal species of concern. Most of the trees in the study area are heritage trees that are subject to the provisions of the Pleasanton City Code, Chapter 17.16.

Table 25
Summary of Special-Status Species Evaluated

Special-Status Species ^a	State/ Federal Status ^b	Habitat	Habitat Present? ^c	Species Observed?
Invertebrates				
Opler's longhorn moth <i>Adela oplerella</i>	—/SC	Serpentine grasslands.	No	No
Longhorn fairy shrimp <i>Branchinecta longiantenna</i>	—/E	Vernal pools.	No	No
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	—/T	Vernal pools.	No	No
Bay checkerspot butterfly <i>Euphydryas editha bayensis</i>	—/T	<i>Plantago</i> and <i>Orthocarpus</i> spp. on serpentine grasslands.	No	No
Ricksecker's water scavenger beetle <i>Hydrochara rickseckeri</i>	—/SC	Ponds, streams, lakes, marshes.	No	No
Curved-foot hygrotytus diving beetle <i>Hygrotytus curvipes</i>	—/SC	Drainages, seeps, wetland areas.	No	No
Amphibians				
California tiger salamander <i>Ambystoma californiense</i>	CSC/C ^d	Grasslands and grassy understory of valley-foothill hardwoods adjacent to quiet waters of rain pools, ponds, lakes, reservoirs, and streams. Uses animal burrows for summer dormancy. Requires shallow ponds that do not contain fish for larvae development.	Yes	No
California red-legged frog <i>Rana aurora draytonii</i>	CSC/T	Quiet permanent or nearly permanent pools of streams, marshes, and ponds. May move up to one mile from aquatic sites during rainy nights or during seasonal movements.	Yes	No
Foothill yellow-legged frog <i>Rana boylei</i>	CSC/SC	Woodland and forest areas near permanent streams and rivers with cobble beds and riffles.	Marginal	No
Reptiles				
Silvery legless lizard <i>Anniella pulchra pulchra</i>	CSC/SC	Areas with sandy or loose loamy soils under sparse vegetation of beaches, chaparral, or pine-oak woodland; or under sycamores, cottonwoods, or oaks that grow on stream. Commonly found in leaf litter at the bases of sycamores, cottonwoods, and oaks, and in loose soil near the bases of slopes and near permanent or intermittent streams.	Marginal	No
Northwestern pond turtle <i>Clemmys marmorata marmorata</i>	CSC/SC	Permanent or nearly permanent water in ponds, lakes, streams, irrigation ditches or permanent pools along intermittent streams.	Yes	No
Southwestern pond turtle <i>Clemmys marmorata pallida</i>	CSC/SC	Permanent or nearly permanent water in ponds, lakes, streams, irrigation ditches or permanent pools along intermittent streams.	Yes	No
San Joaquin whipsnake <i>Masticophis flagellum ruddocki</i>	CSC/SC	Open, dry, valley grassland and saltbush scrub associations. Uses mammal burrows for refuge and probably oviposition sites.	Yes	No
Alameda whipsnake <i>Masticophis lateralis euryxanthus</i>	T/T	Northern coastal scrub or chaparral, but also may occur in adjacent habitats.	Marginal	No
California horned lizard <i>Phrynosoma coronatum frontale</i>	CSC/SC	Scrubland, grassland, coniferous forests, broadleaf woodland and lowlands along sandy washes. Needs open areas for sunning and fine, loose soil for burrowing.	Yes	No

Special-Status Species ^a	State/ Federal Status ^b	Habitat	Habitat Present? ^c	Species Observed?
Fish				
Delta smelt <i>Hypomesus transpacificus</i>	T/T	Waters of lower and middle reaches of the Sacramento-San Joaquin Delta.	No	No
Central Valley steelhead <i>Oncorhynchus mykiss</i>	--/PT	Large streams and rivers of coastal California and their tributaries.	No	No
Winter-run chinook salmon <i>Oncorhynchus tshawytscha</i>	E/E	Large coastal streams and rivers from the Sacramento River north.	No	No
Sacramento splittail <i>Pogonichthys macrolepidotus</i>	E/E	Backwater sloughs and creeks of the lower Sacramento-San Joaquin River Delta.	No	No
Birds				
Cooper's hawk <i>Accipiter cooperii</i>	CSC/--	Nests in second-growth conifer stands or deciduous riparian areas, usually near streams.	Yes	No
Sharp shinned hawk <i>Accipiter striatus</i>	CSC/--	Riparian habitats, but found in all habitats except alpine and open prairie. Nests in dense, even-aged, single-layered forest canopy, usually near water.	Yes	No
Tricolored blackbird <i>Agelaius tricolor</i>	CSC/SC	Nomadic, breeds near freshwater, preferably in emergent marsh of dense cattails or tules, and also in thickets of willow, blackberry, and wild rose. Forages for seeds and insects in grasslands and croplands.	Yes	No
Bell's sage sparrow <i>Amphispiza belli belli</i>	--/SC	Chaparral dominated by chamise and coastal scrub dominated by sage.	No	No
Golden eagle <i>Aquila chrysaetos</i>	CSC/--	Rolling foothills, mountain areas, sage-juniper flats, and desert. Need open terrain for hunting, such as grasslands, deserts, savannas, and early successional stages of forest and shrub habitats. Rugged, open habitats with canyons and escarpments are most frequently used for nesting.	Yes (Foraging)	Yes
Western burrowing owl <i>Athene cunicularia hypugea</i>	CSC/SC	Open, dry grassland and desert habitats. Nests in old burrows of ground squirrel or other small mammals.	Yes	No
Ferruginous hawk <i>Buteo regalis</i>	CSC/SC	Open grasslands, sagebrush flats, desert scrub, low foothills and surrounding valleys, and fringes of pinyon-juniper habitats.	Yes	No
Mountain plover <i>Charadrius montanus</i>	CSC/C	Forages in short grasslands and plowed fields.	Yes (Foraging)	No
Little willow flycatcher <i>Empidonax traillii brewsteri</i>	--/SC	Willow patches along streams in broad valleys.	No)	No
California horned lark <i>Eremophila alpestris actia</i>	CSC/--	Open habitats with low, sparse cover including grasslands, deserts, and alpine dwarf-scrub habitat above treeline.	Yes	No
American peregrine falcon <i>Falco peregrinus anatum</i>	E/E	Riparian areas and coastal and inland wetlands are important foraging habitats. Nests in woodland, forest, and coastal habitats on high cliffs, banks, dunes or mounds, man-made structures, occasionally tree cavities, and other raptor nests.	Yes (Foraging)	No
Bald eagle <i>Haliaeetus leucocephalus</i>	E/E	Requires large bodies of water, or free-flowing rivers with abundant fish and adjacent snags or other perches.	No	No

Special-Status Species ^a	State/ Federal Status ^b	Habitat	Habitat Present? ^c	Species Observed?
Mammals				
Berkeley kangaroo rat <i>Dipodomys heermanni berkeleyensis</i>	--/SC	Annual grassland, coastal scrub, mixed and montane chaparral, and early successional stages (sparse to open canopy) of valley foothill hardwood and valley foothill hardwood-conifer habitats. Frequents dry, grassy plains, with partly open, friable soil and on hillsides, knolls, and ridges with sparse to moderate chaparral cover.	Marginal	No
Greater western mastiff-bat <i>Eumops perotis californicus</i>	CSC/SC	Arid or semi-arid habitats including coastal scrub, annual and perennial grasslands, chaparral, conifer and deciduous woodlands. Requires caves and rocky crevices for roosting.	Yes	No
Small-footed myotis bat <i>Myotis ciliolabrum</i>	--/SC	Arid wooded and brushy uplands near water. Roost in caves, buildings, mines, crevices and under bridges.	Yes	No
Long-eared myotis bat <i>Myotis evotis</i>	--/SC	Nearly all brush, woodland and forest habitats. Coniferous woodland and forests preferred.	Yes	No
Fringed myotis bat <i>Myotis thysanodes</i>	--/SC	Valley foothill hardwood and hardwood conifer forest habitats, occasionally at sea level but usually above 4000 feet elevation.	Marginal	No
Long-legged myotis bat <i>Myotis volans</i>	--/SC	Woodland and forest habitats, chaparral, and coastal scrub, occasionally at sea level but usually above 4000 feet elevation. Uncommon in desert and arid grassland. Roosts in buildings, crevices, spaces under bark, and snags.	Marginal	No
Yuma myotis bat <i>Myotis yumanensis</i>	--/SC	Open forests and woodlands with sources of water over which to feed. Roosts in buildings, mines, caves and rocky crevices.	Yes	No
San Francisco dusky-footed woodrat <i>Neotoma fuscipes annectens</i>	CSC/SC	Forest habitats of moderate canopy and moderate to dense understory. Can be abundant in chaparral habitats. Generally absent from cultivated land and open grasslands of the Central Valley. Prefers forest habitats with moderate canopy, year-round greenery, a brushy understory, an suitable nest building materials.	Marginal	No
San Joaquin Valley woodrat <i>Neotoma fuscipes riparia</i>	--/C	Prefers habitats with moderate canopy, year-round greenery, a brushy understory, and suitable nest building materials.	No (outside current known range)	No
Pacific western big-eared bat <i>Plecotus townsendii townsendii</i>	CSC/SC	All habitats below subalpine. Prefers mesic habitats. Roosts in caves, tunnels, and buildings.	Yes	No
Riparian brush rabbit <i>Sylvilagus bachmani riparius</i>	E/--	Dense brush cover of thickets, vines, brambles or dense riparian vegetation in oak and conifer habitats.	No	No
San Joaquin kit fox <i>Vulpes macrotis mutica</i>	T/E	Grasslands, saltbush scrub, open woodlands, foothills and alkaline sink valley floor habitats	No (outside current known range)	No

Special-Status Species ^a	State/ Federal Status ^b	Habitat	Habitat Present? ^c	Species Observed?
Plants				
Alkali milk-vetch <i>Astragalus tener</i> var. <i>tener</i>	—/SC	Annual herb occurring in playas, valley foothill grasslands and alkaline vernal pools. Occurs in Alameda, Contra Costa, Merced, Monterey, Napa, San Benito, Santa Clara, San Francisco, San Joaquin, Solano, Stanislaus, and Yolo counties.	No	No
San Joaquin spearscale <i>Atriplex joaquiniana</i>	—/SC	Annual herb occurring in Chenopod scrub, meadows and seeps valley and foothill grasslands. Occurs in Alameda, Contra Costa, Colusa, Glenn, Merced, Napa, Sacramento, San Benito, Santa Clara, San Joaquin, Solano, Tulare, and Yolo counties.	No	No
Palmate-bracted bird's beak <i>Cordylanthus palmatus</i>	E/E	Annual herb occurring in chenopod scrub, and valley and foothill grasslands. Occurs in Alameda Colusa, Fresno, Madera, San Joaquin and Yolo counties.	No	No
Mt. Diablo buckwheat <i>Eriogonum truncatum</i>	—/--	Annual herb occurring in chaparral, coastal scrub, and valley and foothill grasslands. Occurs in Alameda, Contra Costa, and Solano counties.	No	No
Congdon's Tarplant <i>Hemizonia parryi</i> ssp. <i>congdonii</i>	—/SC	Annual grasslands occurring in valley and foothill grasslands. Occurs in Alameda Contra Costa, Colusa, Glenn, Monterey, Santa Cruz, San Luis Obispo and, Solano counties.	No	No
Hairless popcorn-flower <i>Plagiobothrys glaber</i>	—/--	Annual herb occurring in meadows, seeps and marshes. Occurs in Alameda,, Merced, Marine, San Benito and Santa Clara counties.	No	No
Most beautiful jewelflower <i>Streptanthus albidus</i> ssp. <i>peramoenus</i>	—/SC	Annual herb occurring in chaparral and valley and foothill grasslands on serpentine soils. Occurs in Alameda, Contra Costa, and Santa Clara counties.	Marginal	No
Caper-fruited tropidocarpum <i>Tropidocarpum carparideum</i>	—/SC	Annual herb occurring in chaparral and valley and foothill grasslands on serpentine soils. Occurs in Alameda, Contra Costa, Glenn, Monterey, Santa Clara, and San Joaquin counties.	Marginal	No

^a Compiled from the CNDDB/ RareFind report and letter from the U.S. Fish & Wildlife Service (USF&WS).

^b Status Categories: Federal status determined from the USF&WS letter. State status determined from *Endangered and Threatened Animals of California* (January 1997), *Special Animals* (August 1994), and/or *Special Plants List* (January 1997), prepared by DFG Natural Diversity Data Base. CNPS status determined from *CNPS Inventory of Rare and Endangered vascular plants of California* (Skinner and Pavlik, 1994). Codes used in table are as follows:

E: Endangered	P: Proposed	* Possibly extinct.
T: Threatened	R: California Rare	CSC: DFG "Species of Special Concern."
C: Candidate: Taxa for which the Fish and Wildlife Service has sufficient biological formation to support a proposal to list as endangered or threatened.	SC: USF&WS Species of Concern: Taxa for which existing information may warrant listing, but for which substantial biological information to support a proposed rule is lacking.	

^c Sources of information used to evaluate habitat are listed in Section II.A. Jennings and Hayes (1994) was used for additional information on amphibian and reptile species of special concern.

^d California Department of Fish and Game considers this species Threatened for the purposes of environmental review.

Source: Sycamore Environmental Consultants, Inc.

(b) *Animal Taxa of Concern.* Forty-three special status wildlife species have been recorded or could potentially occur in Alameda County within the study area. These species are either state- or federally listed as threatened or endangered, or are species of special concern. Table 25 presents information on the status of each species, its preferred habitat, the occurrence of potentially suitable habitat within the project study area, and Sycamore Environmental's field survey observation records for each species.

Potentially suitable habitat for 27 of the 43 animal taxa occurs within the project area. Five taxa (California tiger salamander, California red-legged frog, Foothill yellow-legged frog, Northwestern pond turtle, and Southwestern pond turtle) may use the aquatic habitats associated with Sycamore and Happy Valley creeks and several stock ponds found within the study area. California tiger salamanders have been reported to occur in garden and wetland habitats on property immediately adjacent to the study area. CNDDDB/RareFind records show California red-legged frogs occur at a number of locations near the study area (Sycamore Environmental, 1997(a)). Because of the intermittent nature of water in most of the creeks within the project area, the pond turtles are unlikely to be present. No turtles were observed in these habitats during this study.

The open fields and grasslands provide suitable foraging habitat for a number of bird taxa of concern, including Peregrine falcon, Golden eagle, Ferruginous hawk, Western burrowing owl, California horned lark, Tricolored blackbird, and Mountain plover. Intensive rodent control programs within the project area have apparently reduced ground squirrel numbers, a major prey base for the eagles and hawks. The scarcity of ground squirrels may also limit the use of the area by Burrowing owls, which use their burrows for shelter and nesting. California horned larks, Tricolored blackbirds, and Mountain plover may use the area opportunistically as different seed and insect crops become seasonally available. These species were not observed during this study nor was evidence of nesting observed. (Mountain plover does not nest in California.) These grassland areas may also be used by several reptile species of concern including the San Joaquin whipsnake and California horned lizard.

The project area provides marginal habitat along the brushy hillsides bordering the creek channels for two reptile species: the Alameda whipsnake, which is a federally threatened species, and the Silvery legless lizard, a species of concern. Alameda whipsnakes most commonly occur in chaparral habitat, which does not appear within the study area. It is unlikely that Alameda whipsnake occurs in the Project Study Area due to the absence of appropriate habitat.⁵⁸ Silvery legless lizards are likely to be restricted to friable soils that can be found in riparian corridors along creeks. This habitat may also provide marginal habitat for San Francisco dusky-footed woodrat.

Seven species of bats have distributions that include the study area. These species forage largely on insects and may occur in the Study Area while foraging over open fields, above the tree canopies, and over stock ponds. Individual bats may use rocky crevices and spaces under bark of large trees for day roosting, but no sites suitable for colonial roosting of large numbers of bats were observed in the study area.

(2) *Wetlands and Waters of the U.S.* Sycamore Environmental conducted a jurisdictional delineation of wetlands and waters of the U.S. for the mostly-undeveloped 450-acre portion of the 860-acre Happy Valley Specific Plan EIR study area (Sycamore Environmental, 1997(a)).

⁵⁸ Pers. comm., Margaret Roper, December 18, 1997

(a) Definitions. The United States Army Corps of Engineers (Corps) and the United States Environmental Protection Agency regulate the discharge of dredge and fill material into “waters of the United States” under Section 404 of the Clean Water Act.

The Corps jurisdiction over “waters of the United States” extends to the “ordinary high water mark provided the jurisdiction is not extended by the presence of wetlands” (33 CFR Part 328 Section 328.4). Waters of the United States are defined as:

All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide, all interstate waters including interstate wetlands, all other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which would affect interstate or foreign commerce, including such waters: Which are or could be used by interstate or foreign travelers for recreational or other purposes, or from which fish or shellfish are or could be taken and sold in interstate or foreign commerce, or which are used or could be used for industrial purposes by industries in interstate commerce; all impoundments of waters otherwise defined as waters of the United States interstate commerce, tributaries of waters identified in paragraphs 1-4 of this section, the territorial sea, and wetlands adjacent to waters (40 CFR 230.3).

Wetlands are defined for regulatory purposes as “Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.” Wetlands generally include swamps, marshes, bogs, and similar areas (33 CFR 328.3, 40 CFR 230.3). Wetlands also include less conspicuous wetland types such as vernal pools and other seasonal wetlands.

The Corps will typically take jurisdiction over the portion of a project study area that contains waters of the United States and adjacent or isolated wetlands.

(b) Jurisdictional Information. Field work for a Section 404 delineation was conducted in June and July, 1997 in accordance with the procedures of the U.S. Army Corps of Engineers Wetland Delineation Manual (Corps 1987). Waters of the U.S. were also identified during the jurisdictional delineation.

The routine on-site determination method was used for determining the presence of freshwater seeps, seasonal wetlands, and wetlands adjacent to channels. The acreage of wetlands, along with lengths, widths, and areas of jurisdictional channels within the study area was recorded (Sycamore Environmental, 1997(a)). All data points, photo points, and potential jurisdictional features are shown on Figure 26.

The potential acreage of jurisdictional wetlands in the study area is 2.33 acres. The potential waters of the U.S. is 4.00 acres. Thus, there are 6.33 acres potentially subject to Corps jurisdiction in the study area. This represents approximately one percent of the total acreage in the study area. All potential jurisdictional features are subject to a final determination by the Corps. The Corps may require a field verification as part of this determination.

Waters of the U.S. Potential jurisdictional features shown in Figure 26 include two named creeks and several unnamed channels, unnamed intermittent drainages, and ponds. The channels in the study area consist of (1) rocky, unvegetated channels, (2) vegetated channels with hydrophytic plants, and (3) channels with riparian woodlands.



Figure 26

Jurisdictional Delineation

Source: Sycamore Environmental Consultants

- **Creeks and Channels.** Ten waters of the U.S. (channels) were identified in this delineation (CH 1 through CH 10). These include Sycamore Creek (CH 1) and Happy Valley Creek (CH 7). Channels vary in length and other characteristics. Channels 2 and 3 are vegetated channels. The other channels in the south half of the study area (CH 4, CH 5, CH 6, CH 8, CH 9, and CH 10) primarily have rocky beds and banks. Channels 4 through 10 are minor tributaries to Happy Valley Creek (CH 7). Five of these channels drain into Happy Valley Creek in the study area. Channel 10 drains into Happy Valley Creek immediately outside the study area.

The portions of Happy Valley Creek and Sycamore Creek within the study area are mapped on the Livermore and La Costa USGS quads as intermittent creeks. However, portions of Sycamore Creek can flow nearly year round due the input of water in the upper reaches of Sycamore Creek from a natural spring (NS 2). A number of minor, intermittent drainages flow into Sycamore and Happy Valley creeks in the study area. Happy Valley Creek and Sycamore Creek flow into the Arroyo de la Laguna, which is a tributary to Alameda Creek.

Sycamore Creek runs along the northern border of the project area through a riparian woodland. Herbaceous vegetation along the creek includes annual, non-native grasses (e.g., Soft chess, Goatgrass, and Medusa head).

Happy Valley Creek, in the southern portion of the study area, is a rocky, unvegetated channel that supports a riparian woodland as it flows north and then west. Vegetation along the creek includes introduced species such as Soft chess, Italian ryegrass, Oat, and Medusa head, and hydrophytic native species such as Baltic rush. Happy Valley Creek carries water seasonally in the project study area.

- **Ponds.** Three ponds occur in the study area. Pond 1 has been created through construction of a small dam across Sycamore Creek near the existing Spotorno residence. Pond 2 is located in a natural seep area (FS 3) east of Spotorno Flat, below the junction of several intermittent channels. Pond 3 is a permanent pond located in the hills southeast of the Spotorno Flat Area. This pond is completely encircled by a dense growth of Narrow-leaved cattails and tules.

Wetlands. Wetlands, such as freshwater seeps, seasonal wetlands, and natural springs, occur within the project study area. The nine freshwater seeps, one seasonal wetland, and two natural springs are mapped on Figure 26. Vegetation in the seeps includes Baltic rush and non-native grasses. The seasonal wetland is distinguished from the freshwater seeps in the study area primarily by the presence of annual species of plants and by the presence of alkali deposits on its dried surface. One of the natural springs is located south of Pond 1, whereas the second spring is located in a freshwater seep.

(c) Regulatory Considerations: Permits and Mitigation Plans. Given the physical features of the site as described above, the project may be subject to regulation by the U.S. Army Corps of Engineers, the Regional Water Quality Control Board, and the California Department of Fish and Game.

U.S. Army Corps of Engineers: Section 404 Permit. A Section 404 permit will be required from the U.S. Army Corps of Engineers (Corps) if more than one-third of an acre of jurisdictional wetlands and/or waters of the U.S. are to be filled, or more than 200 linear feet of creeks or channels are to be disturbed, or under other circumstances, such as if special aquatic sites would be affected.

The type of permit(s) needed will be determined following the field verification and subsequent discussions with the Corps, and adoption of project alternatives by the City of Pleasanton. If required as a

result of permit conditions, wetland mitigation measures would be documented in a formal Wetland Mitigation and Monitoring Plan that would be submitted to the U.S. Army Corps of Engineers as an appendix to a Pre-Construction Notification.

Regional Water Quality Control Board: 401 Water Quality Certification or Waiver. If a Section 404 permit is required by the Corps, a Water Quality Certification must be requested from the Regional Water Quality Control Board (RWQCB). In accordance with General Condition 9 of a Nationwide Permit, a Water Quality Certification or waiver from the Board must be obtained before the Section 404 permit can become effective.

California Department of Fish and Game 1601 Streambed Alteration Agreement. The California Department of Fish and Game (DFG) has regulatory authority wherever water flows in the state, including ditches dug for flood control. Projects that would alter a streambed in any way, including grading, filling, straightening, widening, deepening, or extending structures (such as bridges or culverts) across the stream) require a 1601 Streambed Alteration Agreement from DFG. If a 1601 Streambed Alteration Agreement is required, it will be requested from DFG prior to commencement of construction. A revegetation and erosion control plan may be required as part of the Streambed Alteration Agreement. Fees are required for Streambed Alteration Agreements based on construction costs of the project. Any permit conditions would be followed by the applicant.

3. Impacts

a. Riparian Habitats

Riparian habitats in the Plan Area are protected from adverse impacts by the requirements of the Specific Plan and existing state regulations requiring consultation with the Department of Fish and Game.

(1) Sycamore Creek. The Specific Plan requires that all development, including residential uses and trails, be set back at least 100 feet from the existing centerline of Sycamore Creek or at least 10 feet from the outermost drip line of the existing riparian woodland, whichever is greater. This requirement is intended to protect against encroachment upon the riparian woodland along the creeks and the removal of riparian trees.

If required, an application will be made to the San Francisco District of the Corps for the appropriate Section 404 permit. This application would be based on the information in the Jurisdictional Delineation Report. The permit conditions would be followed by the applicant.

Consultation with the California Department of Fish and Game in any areas subject to their jurisdiction is required prior to any proposed encroachment into the designated corridor, or consultation with the U.S. Army Corps of Engineers prior to any activity that would occur within the bed and bank of a waters of the U.S. The California Department of Fish and Game (DFG) has regulatory authority wherever water flows in the state, including ditches dug for flood control. If required, a 1601 Streambed Alteration Agreement(s) will be obtained from DFG prior to commencement of construction.

(2) Happy Valley Creek. The proposed Golf Course design would require realignment of Happy Valley Creek and filling of some channels. Figure 31, in Appendix C, illustrates the proposed grading plan for the Golf Course; Figure 32, also in Appendix C, illustrates the impact of that plan on existing

creeks and channels. Approximately 69 percent of the length of Happy Valley Creek and 71 percent of the wetlands associated with the creek would be lost to grading.

To address potential impacts on Happy Valley Creek, the Specific Plan requires that appropriate permits and/or agreements be obtained from regulatory agencies (DFG, USF&WS, and/or Corps) prior to realignment of Happy Valley Creek. It also requires the preparation and approval of a riparian restoration plan prior to approval of a grading plan for the Project Area. As noted in "Characteristics of the Project," the riparian restoration plan must discuss anticipated impacts and proposed mitigation measures associated with the proposed realignment of Happy Valley Creek and any other affected riparian corridors in the project area subject to the jurisdiction of DFG and/or the Corps.

b. Heritage Trees

Heritage trees located in the study area could be affected by project development. The removal of a heritage tree is considered a significant impact if not adequately mitigated.

The Specific Plan requires the preparation and approval of a Master Landscape Plan and a Tree Preservation Plan prior to the approval of a grading plan for the project area. As indicated in the Specific Plan, these plans should include the following provisions:

- Avoidance of heritage trees to the extent possible.
- Prohibition on the placement of any chemical or other deleterious substance or material on any heritage tree.
- Prohibition on disturbance of the soil or placement of any chemical or other deleterious substance or material on the soil within the drip line area of any heritage tree.
- Replacement of any trees that are removed "inch for inch" (in other words, for each inch of dbh lost), an equal amount of replacement inches would be planted, *or* planting two to three times the number of individual trees lost, *or* a combination of these measures, at the discretion of the City of Pleasanton. (These measures are recommended in the Tree Survey and Arborist Report for Happy Valley Specific Plan EIR.)

Conformance with these requirements of the Specific Plan would avoid potentially-significant adverse impacts on heritage trees.

c. Wetlands and Waters of the U.S.

(1) Golf Course. Grading for the Golf Course would affect some portions of existing wetlands and waters of the U.S. As shown in Table 26, a total of 17,176 linear feet of channels (76 percent of the total length on the Golf Course), associated with 2.08 acres of wetlands (79 percent of the total area), would be lost to grading. In addition, 0.35 of 0.38 acre of freshwater seeps (92 percent of the total) would be lost. These actions would represent a significant adverse impact of the project if not mitigated.

Impact J1. Disturbance of wetlands and waters of the U.S. exceeding one-third acre of wetlands and 200 linear feet of channels.
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Table 26
Waters of the U.S. and Wetlands Affected by Golf Course Grading

Feature	Existing		Undisturbed by Grading		Lost to Grading	
	Length (Feet)	Area (Acres)	Length (Feet)	Area (Acres)	Length (Feet)	Area (Acres)
Waters of the U.S.						
Channels	22,690	2.62	5,514	0.55	17,176	2.08
Ponds		0.22		*		0
Wetlands						
Freshwater Seeps		0.38		0.03		0.35
Seasonal Wetlands		0.16		0.00		0.16

* Pond 3 (0.22 acre) would be temporarily disturbed by construction of the Bypass Road, but would not be permanently affected.

Source: Sycamore Environmental Consultants, Inc.

Most of the channels that would be affected by golf course grading are intermittent and contain no shrub or tree vegetation along their banks. Some of these tributaries are deeply incised and have rocky or gravelly beds with little vegetation.

The City's intention is that design of the drainage system will allow the project to provide for improved habitat values. Minimizing the potential for soil erosion and sedimentation within the reconstructed drainages is of primary importance. The golf course designer will utilize hydrological and sedimentation data, calculated for each of the drainages within the golf course, to design the realigned channels. Possible design features to be considered in the program mitigation for golf course drainage ways include (1) moderating the slope of channel banks to reduce erosive conditions, (2) varying channel widths and depths, as well as varying the slope of the channel, in order to provide variation in speed and depth of seasonal flow, and (3) planting adjacent side slopes with native grasses, groundcovers, and native riparian tree species.

Review of the proposed reconstruction of the drainage system by the U.S. Army Corps of Engineers under Section 404 of the Clean Water Act would be required, as noted above. The Corps asserts jurisdiction over wetlands and waters of the U.S., and must be consulted prior to any activity that would occur within the limits of its jurisdiction. If a Section 404 permit is required, an application must be made to the San Francisco District of the Corps. The application will be based on the information in the Jurisdictional Delineation Report.

Corps regulation is intended to avoid adverse impacts on wetlands and waters of the U.S. Once its review is completed, the Corps may require additional mitigation beyond the program mitigation anticipated by the City.

(2) Other Development Locations. Table 27 details channels, ponds, and freshwater seeps that are located within the biological resources survey area (Figure 25) but are not on the proposed Golf Course. Grading plans for these areas have not yet been prepared. The grading plans for residential development areas, roadways, and other activities that disturb identified biological resources will be required to con-

form to the requirements of the Specific Plan (see "Characteristics of the Project" at the beginning of this section).

Table 27
Waters of the U.S. and Wetlands in
Non-Golf Course Portions of the Specific Plan Area

Feature	Existing	
	Length (Feet)	Area (Acres)
Waters of the U.S.		
Channels	8,809	1.03
Ponds		0.23
Wetlands (Freshwater Seeps)		1.79

Source: Sycamore Environmental Consultants, Inc.

d. California Tiger Salamander

Field surveys for this project were conducted in May and June, 1997, which is outside of the survey window (November through March) for this species. Suitable habitat for this species occurs in the study area, and there are known records for this species within 3.5 miles of the study area. Disturbance or removal of wetland habitat or aestivation habitats favored by this species would be a significant impact.

A field meeting with DFG was conducted on December 18, 1997, to discuss the proposed project and to evaluate potential survey and mitigation requirements. DFH subsequently determined that the approximately 450-acre Plan Area provides suitable habitat for California tiger salamander except for the plowed field off Alisal Road known as Spotorno Flat. The City was informed on February 3, 1998 that DFG will require preparation of a California Tiger Salamander Mitigation and Monitoring Plan. The mitigation plan will describe avoidance and/or mitigation strategies that the City would implement.

To avoid potential adverse impacts on the California tiger salamander, the Specific Plan requires that the City:

- Prepare a California Tiger Salamander Mitigation and Monitoring Plan, and submit that plan to DFG for review and approval.
- Obtain a letter of concurrence from DFG signifying their acceptance of the Plan and the mitigation measures it describes.
- Implementation of the mitigation measures described in the Plan.

e. California Red-Legged Frog

The project study area is within the range of the California red-legged frog (RLF). Creeks and ponds in the study area provide potential breeding habitat for RLF. The RLF, which frequents ephemeral wetlands such as seeps and springs in open grasslands, also uses small mammal burrows up to several dozen

meters from a water source for refugia. Implementation of the project could result in a loss of habitat or direct mortality of this species. Direct mortality of this federally-listed threatened species would be a significant impact.

Sycamore Environmental conducted a Site Assessment during May-June, 1997, in accordance with the U. S. Fish and Wildlife Service's *Guidance on Site Assessment and Field Surveys for California Red-legged Frog*. The Site Assessment was completed on July 16, 1997, and the results were submitted to the Service. Based on the Site Assessment, the Service determined "that habitat suitable for this species is present at or near the site." Because the Happy Valley study area provides suitable habitat for RLF and there are known collection records nearby, the Service is not requiring additional field surveys, but instead is recommending the preparation of mitigation measures and further consultation with the Service.

Sycamore Environmental biologists met with Mr. Mike Thabault, Coast, Bay, Delta Branch Chief of the USF&WS, on December 23, 1997, to discuss potential mitigation measures, mitigation plan preparation issues, and permit requirements. The Service has concluded that a mitigation and monitoring plan must be submitted and approved before "take" can occur. The mitigation plan will need to be submitted to the Service through the U.S. Army Corps of Engineers as part of the Section 404 permit approval process. This action will initiate a formal Section 7 Consultation between the applicant and the Service.

To avoid potential adverse impacts on the California red-legged frog, the Specific Plan requires that the City take the following actions:

- Prepare a RLF mitigation plan, and consult with the Service regarding the details involved in preparing the plan.
- Prepare and submit the mitigation plan to the U.S. Army Corps of Engineers as part of the Section 404 permit process.
- Obtain a Biological Opinion from the Service authorizing incidental take after they review the mitigation plan.

f. Raptors

Active raptor nests are protected under the provisions of the Migratory Bird Treaty Act and the California Fish and Game Code. Red-tailed hawks, Red-shouldered hawks, Cooper's hawks, Sharp-shinned hawks, and Golden eagles potentially could establish nests within the proposed project area prior to construction. The removal or disturbance of a nest during construction resulting in abandonment of eggs or young, or direct mortality, would constitute a significant impact.

The Specific Plan requires a preconstruction survey to verify the presence or absence of active raptor nests prior to the start of construction activities, with a prohibition on construction activities that would result in removal or abandonment of an active raptor nest. A qualified biologist should determine if disturbance of any active nests will occur due to construction activities. If construction begins outside the breeding season, no surveys are necessary.

g. Tricolored Blackbirds

Tricolored blackbirds are highly nomadic and could move into the study area prior to implementation of the proposed project. Potential nesting habitat for this species is limited to a small area of marsh vegeta-

tion surrounding Pond 3. Removal of this habitat or disturbance of nesting Tricolored blackbirds at Pond 3 would constitute a significant impact to this species.

To avoid potential adverse impacts, the Specific Plan requires that a preconstruction survey of the pond be conducted to verify the presence or absence of active Tricolored blackbird nests if construction will affect Pond 3. This survey is to be conducted prior to commencement of construction activities. A qualified biologist should determine if any active nests are present at the pond. If construction begins outside the breeding season, no surveys or mitigation are necessary.

4. Mitigation Measures

Impact J1. Disturbance of wetlands and waters of the U.S. exceeding one-third acre of wetlands and 200 linear feet of channels.

The combination of requirements already in place (e.g., jurisdiction of the U.S. Army Corps of Engineers, California Department of Fish and Game, and Regional Water Quality Control Board) and requirements included in the Specific Plan would mitigate most impacts related to biology to less-than-significant levels. The exception is the impact on wetlands and waters of the U.S. that would be the consequence of the recontouring of lands included within the Golf Course.

The Specific Plan requires that the reconstruction of the drainage system within the golf course incorporate design features that would reduce erosive conditions along drainage ways; result in variation in the speed and depth of seasonal flow in those drainage ways; and vegetate adjacent side slopes for reduction of erosion and, possibly, improvement in habitat value. This program mitigation would partially, but not fully, mitigate the impact on wetlands and waters of the U.S. The following mitigation would be required in addition to the program mitigation incorporated into the Specific Plan.

Measure J1. Provide such additional mitigation of wetland impacts as may be required by the Army Corps of Engineers upon their review of the City's application for a fill permit.

The Army Corps of Engineers may find the City's program mitigation adequate, or may require additional measures preliminary to issuing a fill permit. Implementation of any such additional measures would be required for the Golf Course grading plan to be implemented.

Implementation of Measure J1 would reduce wetlands impacts to the less-than-significant level.

K. CULTURAL RESOURCES

1. Characteristics of the Project

The Specific Plan (Section VIII.F) requires that the following procedures be followed during implementation of the project:

- The old hay barn located on Lot 101 shall be preserved and restored, if feasible. If restoration proves infeasible, then, upon acquisition of Lot 101 for the golf course, the City shall consider reconstructing the barn elsewhere within the Plan Area using the existing design and materials. If reconstruction also proves infeasible, the barn shall be documented through a combination of large-format photography or architectural renderings in combination with archival research. A technical report of findings shall be prepared to present the results of research and documentation, and the report shall be submitted to local historic societies and libraries and the Northwest Information Center at Sonoma State University.
- If previously undiscovered historic or prehistoric resources are encountered during construction, work in the immediate area shall cease until such time that a qualified archaeologist has an opportunity to evaluate the find and make recommendations for mitigation, if warranted.

2. Setting

The cultural setting of the Happy Valley Specific Plan area is described in detail in Appendix D of this EIR. The following paragraphs summarize this material.

a. Background

(1) Prehistoric Background. The chronological sequence for central California and the Lower Sacramento Valley begins with the Windmill Pattern (Fredrickson, 1973), which includes sites that date from about 4,500 (or earlier) to 3,500 years ago, followed by the Berkeley Pattern (previously part of the “Middle Horizon”), which covers a period from about 3,500 to 1,500 years ago in the San Francisco Bay region, and the late prehistoric period, or Augustine Pattern (formerly the “Late Horizon”), which ranges from about 950 to 150 years ago. The Windmill sites are thought to be associated with an influx of peoples from outside of California who brought with them an adaptation to river-wetland environments. Berkeley Pattern sites are distributed in more diverse environmental settings, although a riverine focus is common. The Augustine Pattern and the late prehistoric period can be characterized as the apex of Native American cultural development in this part of California. It is typified by intensive fishing, hunting and gathering (particularly acorns), a large population increase, increased trade and exchange networks, increases in ceremonial and social attributes, the practice of cremation (in addition to flexed burial), and certain artifact types.

There is debate as to whether Bay Area prehistoric cultural patterns are totally separate from, parallel to, or convergent with the cultural evolutions of the Lower Sacramento region. Bickel (1981:6-11) presents a detailed historical analysis of the changes in thinking about the Bay Area’s place in regional culture history over the years; further analysis of the various cultural interrelationships can be found in Hughes (1994), Fredrickson (1993) and Elsasser (1986).

(2) *Ethnographic Background.* The project area lies within the region occupied at the time of historic contact by the Ohlone or Costanoan group of Native Americans (Kroeber, 1925). Although the term Costanoan is derived from the Spanish word *Costaños*, or “coast people,” its application as a means of identifying this population is based on linguistics. The Costanoans spoke a language now considered one of the major subdivisions of the Miwok-Costanoan, which belonged to the Utian family within the Penutian language stock (Shipley, 1978: 82-84). Costanoan actually designates a family of eight languages. Of these, Chochenyo or East Bay Costanoan was the language spoken by the estimated 2,000 people who occupied the “. . . east shore of San Francisco Bay between Richmond and Mission San José, and probably also in the Livermore Valley” (Levy, 1978:485).

The other seven languages of the Costanoan family were spoken by tribal groups occupying the area from the Pacific Coast to the Diablo Range, and from San Francisco to Point Sur. Modern descendants of the Costanoan prefer to be known as Ohlone. The name Ohlone is derived from the Oljón tribal group which occupied the San Gregorio watershed in San Mateo County (Bocek, 1986: 8). The two terms (Costanoan and Ohlone) are used interchangeably in much of the ethnographic literature.

On the basis of linguistic evidence, it has been suggested that the ancestors of the Ohlone arrived in the San Francisco Bay area about 500 A.D., having moved south and west from the Sacramento-San Joaquin Delta region. The ancestral Ohlone displaced speakers of a Hokan language and were probably the producers of the artifact assemblages that constitute the Augustine Pattern described above (Levy, 1978:486).

The arrival of the Spanish in the San Francisco Bay Area in 1775 led to a rapid and major reduction in Native California populations. Diseases, declining birth rates, and the effects of the mission system served to largely eradicate the aboriginal lifeways (which are currently experiencing a resurgence among Ohlone descendants). Brought into the missions, the surviving Ohlone, along with former neighboring groups of Esselen, Yokuts, and Miwok were transformed from hunters and gatherers into agricultural laborers (Cambra, et al. 1996; Levy, 1978; Shoup and Milliken with Brown, 1994). With abandonment of the mission system and the Mexican takeover in the 1840s, numerous ranchos were established. Generally, the few Native Californians who remained were then forced, by necessity, to work on the ranchos. For a thorough discussion of the Ohlone, see Cambra, et al. (1996).

(3) *Historic Background.* The historic background of the site is divided into two periods: (1) the Spanish and Mexican Periods (1769-1848) and (2) the American Period (1848-Present).

(a) *The Spanish and Mexican Periods: 1769 to 1848.* Numerous Spanish exploratory expeditions would have passed through the Pleasanton area during the Spanish era. These included expeditions led by Fages, Portola, Fages and Crespi, Anza, Rivera, and Moraga (Levy, 1978:486). Initial historic exploration of the San Ramon, Amador, and Livermore Valleys occurred between 1769 and 1810.

Following the era of exploration, four Spanish institutions were employed to settle Alta California: missions, presidios, pueblos, and ranchos. Of these, the missions were the most successful. The favorable descriptions of the study area by early explorers Portola and De Anza led to the establishment of Mission Santa Clara and Pueblo de San Jose de Guadalupe in 1777. Mission San Jose, established in 1797, would have had the greatest impact on the local Ohlone population within the study area (Hoover, 1990:6).

After Mexico seceded from Spain in 1822, grants of land to private citizens began. Following the secularization of the missions in 1833, the number of land grants increased substantially. The Livermore Valley was divided into three ranchos: Rancho de las Positas, owned by Robert Livermore; Rancho Santa

Rita, owned by Juan Bernal; and Rancho Valle de San Jose, which was centered in Pleasanton, owned by Augustin Bernal (Banks, 1978:6).

During the Mexican Period (1822 to 1846), the study area was located in the southwestern section of Rancho Valle de San Jose (Beck and Hasse, 1974:30). Within this huge rancho (51,000+ acres) were several adobe structures. Three are in Pleasanton near the project area: the Juan Bernal adobe and two Kottinger family adobes (Anastasio, 1986:3). John W. Kottinger, one of the earliest Pleasanton settlers, also became Pleasanton's the first storekeeper some time after 1852. Part of Kottinger's old adobe barn still stands on Ray Street outside the project area (Hoover, 1990:15).

(b) *The American Period: 1848 to the Present.* In 1848, California became a United States territory as a result of the Treaty of Guadalupe Hidalgo, which ended the war with Mexico. The Gold Rush of 1849 brought a massive influx of immigrants to California from all parts of the world: California's 1848 population of less than 14,000 (exclusive of Native Americans) increased to 224,000 in four years.

California was formally admitted to the United States as a state in 1850. In 1853, Alameda County was created from the western and southern sections of Contra Costa County. The precursor to Pleasanton was a small settlement named Alisal, founded in 1857 when Duerr and Nusbaumer opened a store in John Kottinger's house. Kottinger, who had immigrated from Austria in 1851, married into the Bernal family and operated a livestock ranch on a portion of the Bernal rancho (Wood 1883:478). By the mid-nineteenth century, the majority of Rancho lands were subdivided as a result of population growth in the Livermore-Alameda Valley. By the 1870s, Rancho Valle de San Jose had been reduced in size to 500 acres (Thompson and West, 1878:119).

By 1864, the town of Alisal had a hotel and a school in addition to the general store operated in Kottinger's house (Hinkel and McCann, 1937:195). The town of Pleasanton was named in 1867 for General Alfred Pleasonton (sic); the misspelling was apparently a clerical error when the post office was established on June 4, 1867 (Bard *et al.*, 1992:26). The center of town moved south to the train station when the railroad arrived in 1869. By 1876, Pleasanton had several hotels, "some good stores," a post office, an express office, and numerous grain warehouses (Halley 1876:502). By the late 1870s, Pleasanton's population had grown to between 500 and 600 (Thompson & West 1878:25).

Pleasanton was incorporated in 1894. It remained a small farming community until after World War II, when the opening of Parks Air Force Base and the Lawrence Livermore Atomic Research laboratory launched a period of growth that transformed the small community into a suburban residential/office community (Anonymous, 1954:4). New residential subdivisions were built in the Pleasanton area starting in the 1950s as highway improvements made commuting easier to Oakland and the East Bay. During the 1970s and 1980s, Pleasanton became one of the fastest-growing areas in the Bay Area as numerous new subdivisions, two large business parks, and a regional shopping center were built in the area. Pleasanton, now a major suburban office/residential community at the southern end of the "I-680 Corridor," has a population of over 58,000.

The 1878 Historical Atlas of the Pleasanton region shows much of the Project Area was owned by "B. Spudorno" (sic) (Thompson and West 1878:52). No further reference to B. Spudorno (sic) was found in the literature. The Spotorno family retained their property; the current owner and resident is Mr. Al Spotorno.

b. Known Cultural Resources and Previous Cultural Resource Surveys

A record search was conducted on May 14, 1997, by the staff at the Northwest Information Center, Rohnert Park, California. All known archaeological sites and previous cultural resource surveys within a one-mile radius of the Happy Valley project boundary were researched. The National Register of Historic Places, the California Inventory of Historic Resources, and California Historical Landmarks Register were examined to determine whether any county, state, or federal historic landmarks or National Register of Historic Places properties were located in the project area.

(1) Known Resources. No previous cultural resource surveys have been conducted within the project boundary, but one archaeological site has been recorded within the Specific Plan Area. CA-ALA-24 is described as “an occupation site that has yielded mortars, pestles, and arrowheads” (Wilson, 1950). The location of the site is somewhat speculative, as the only recording of the property (in 1950) was cursory insofar as locational data were concerned; no map was appended to the original site record. It was simply noted as being located “...on the Anderson Ranch; on a knoll behind the ranch house”.

(2) Previous Surveys in the Vicinity of the Project Area. Ten cultural resource surveys have been conducted within a one-mile radius of the Project Area. From these ten surveys, one archaeological site has been recorded. Site CA-ALA-41 is located about three-quarters of a mile northwest and outside of the project’s northern boundary and is described as “a camp or temporary village site on a slight knoll overlooking the SW (sic) tip of Livermore Valley” (Horner, 1950).

(3) Literature Search Results. In addition to the sources mentioned above, information was gathered from the 1906 U.S. Geological Survey topographic map of the area, an 1863 Rancho Valle de San Jose plat map, and the 1878 Historical Atlas Map of Alameda County. These resources provided limited historic information on the location of possible structures, foundation remains, or other historic resources within the project area.

(4) Field Survey Conducted for this Project. An archaeological field survey of the project area was conducted on May 13-15, 1997 by Lori Harrington and Carrie D. Wills of William Self Associates, and January 13, 1998 by William Self. The archaeological and cultural resources survey area is depicted in Figure 27.

(a) Methodology. The strategy for the field survey was to conduct an intensive survey of the entire area proposed for development or disturbance. Steep slopes (over 45 degrees) were excluded as it was surmised that cultural resource deposits, either historic or prehistoric, were unlikely in these areas. They were, however, examined visually for the presence of historic debris or rock outcroppings that might have served as shelters or could contain petroglyphs or incipient mortars. The survey utilized a transect interval spacing of approximately 30 meters (100 feet) or less, walked in a zigzag pattern. Ground visibility varied from fair to very poor depending on the vegetation. For the most part, ground surface visibility was poor due to tall grasses during the May 1997 survey.

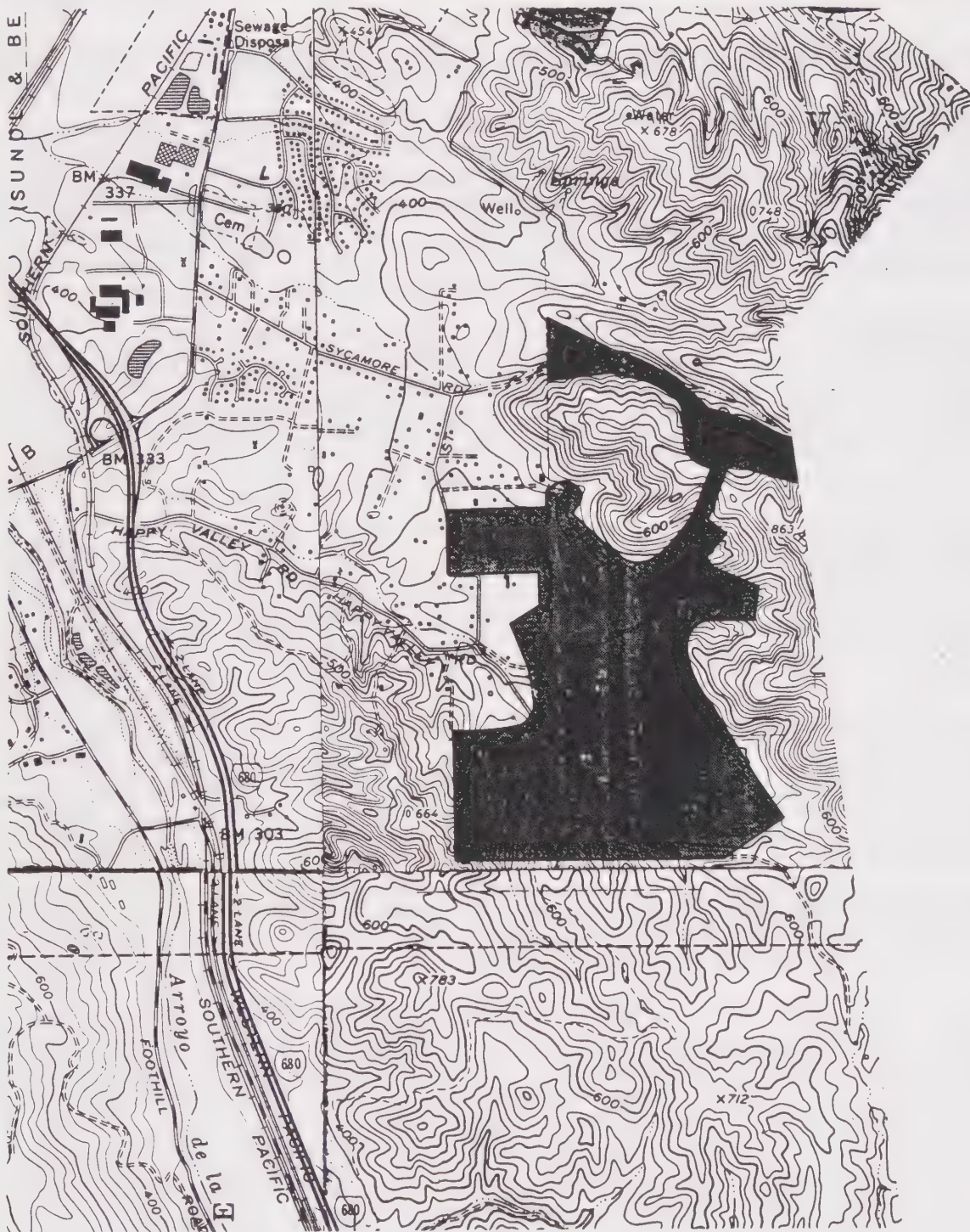


Figure 27
**Cultural Resources
 Survey Area**

(b) Survey Results. No prehistoric cultural sites, features or objects were observed during the survey.

One historic building (designated WSA-1), an historic barn estimated to be over 100 years old, was noted within the project area. This barn appears to have original wooden siding and exhibits some square-headed (hand-wrought) nails, typically used before 1895. The roof appears to have been replaced with more recent roofing materials, and other modifications may have occurred to the structure. The setting has been altered through the introduction of more recent structures. The barn appears to retain some integrity of materials and workmanship and is in its original location.

A metal windmill with "The Aeromotor Co. Chicago" painted on a wind vane extending from the main shaft is located east of Alisal Street and north of the Faith Chapel Assembly. Research indicates that this type of windmill (Model 702) has been in production since 1933 and is the "... most common of all the windmills seen in the field today" (Baker, 1985:116). Due to the utilitarian nature of the windmill (it remains in use), the lack of definitive dating criteria, and the fact that it appears, based on its observed condition, to be of recent manufacture, it is not considered historically significant and was not recorded as an historic property. No foundation remnants or other historic debris were observed near the structure.

No additional historic sites or prehistoric sites, objects or features were observed within the survey area. Some portions of the area were not examined during the survey. The land owned by General Electric (bordering the southeast portion of the Specific Plan area) was not accessible. The Koopmann property (bordering the southern portion of the area) was not examined as it is proposed as open space only. A complete technical report on the results of the survey has been completed and is on file at the California Historical Resources Information System Northwest Information Center offices at Sonoma State University (William Self Associates, 1998).

3. Impacts

a. Significance Criteria

Appendix K of the CEQA Guidelines states that a project will be considered to have a significant effect on cultural resources if it will:

Disrupt or adversely affect a prehistoric or historic archaeological site or a property of historic or cultural significance to a community or ethnic or social group . . .

In addition, CEQA contains provisions relative to preservation of historic and prehistoric cultural sites. Appendix K of CEQA directs public agencies to "avoid damaging effects on an archaeological resource whenever feasible." If avoidance is not feasible, the importance of the site shall be evaluated "... as a means of determining impact and developing mitigation measures." CEQA Appendix K, Section III, states that an "important archaeological resource" is one which:

- A. Is associated with an event or person of:
 - 1. Recognized importance in California or American history, or
 - 2. Recognized scientific importance in prehistory;
- B. Can provide information which is both of demonstrable public interest and useful in addressing scientifically consequential and reasonable or archaeological research questions;

- C. Has special or particular quality such as oldest, best example, largest, or last surviving example of its kind;
- D. Is at least 100 years old and possesses substantial stratigraphic integrity; or
- E. Involves important research questions that historical research has shown can be answered only with archaeological methods.

To evaluate cultural resource sites against such broad criteria requires consideration, among other things, of the overall integrity of the site, the regional culture history (the types, ages and distribution of other sites in the region), and the nature of questions that researchers are attempting to address regarding the history or prehistory of the region.

Archaeological site evaluation assesses the potential of each site to meet one or more of the criteria for “importance” based upon visual surface and subsurface evidence (if available) at each site location, information gathered during the literature and record searches, and the researcher’s knowledge of and familiarity with the historic or prehistoric context associated with each site.

b. Impacts

(1) Impacts on the Historic Barn. Potential impacts of the project on cultural resources result from the possible effects of development that would be permitted by the Specific Plan on the identified historic barn or on other cultural resources that have not yet been identified.

Although the historic barn does not retain complete integrity of materials or setting, it is nonetheless a good example of vernacular barn architecture once common to the Pleasanton and Livermore Valley area. Such barns are now few, imparting an importance on the remaining examples of such a style. Without the benefit of a structural assessment of the property, it is assumed to be important; loss of the resource would be considered a significant impact.

The Plan requires that historic structures be avoided or documented. Adherence to this requirement would assure that potential impacts on this resource, or other historic structures that have not yet been identified, would be reduced to a less-than-significant level.

(2) Impacts on Site CA-ALA-24. The field survey conducted for the project did not relocate this recorded archaeological site. The location of the site as plotted on maps within the state clearinghouse at Sonoma State University is somewhat speculative given the information on the original site record. The area as recorded is now a post-1950 subdivision of homes with large (“ranchette”) lots; the recorded site location would now be completely surrounded by development. It is possible that the site was destroyed during construction of this neighborhood. No developmental impacts associated with this project are proposed for the area encompassing the recorded location of this archaeological site. The proposal should have no impact on this resource.

(3) Impacts on Unidentified Cultural Resources. Even though the field survey conducted for this study did not reveal any prehistoric cultural sites, features, or objects in the Plan Area, it is possible that such sites may be present but obscured by vegetation or buried. Implementation of the project may threaten cultural resources that have gone unnoticed during the surface survey of the area due to vegetation coverage. Areas adjoining the golf course that are proposed as open space may contain cultural resources

that were not addressed as part of the surveys conducted for this project. Should plans change to incorporate areas previously defined as open space, or should any ground-disturbing activities be proposed within any of these areas, they should be subject to survey for the presence of significant cultural resources

Failure to mitigate impacts to important cultural resources would be considered a significant impact. Any discoveries made during construction must be evaluated by a qualified archaeologist, who may propose mitigation measures if warranted.. These procedures will reduce potential impacts on previously-unidentified cultural resources to a less-than-significant level.

(4) Impacts on Buried Human Remains. It is possible that buried prehistoric human remains could be discovered during construction, as they are known to occur in the Pleasanton area. This possibility is addressed by Section 7050.5(b) of the California Health and Safety Code, which states:

In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined, in accordance with Chapter 10 (commencing with Section 27460) of Part 3 of Division 2 of Title 3 of the Government Code, that the remains are not subject to the provisions of Section 27492 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner and cause of death, and the recommendations concerning treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the Public Resources Code.

The County Coroner, upon recognizing the remains as being of Native American origin, is responsible to contact the Native American Heritage Commission within 24 hours. The Commission has various powers and duties to provide for the ultimate disposition of any Native American remains, as does the assigned Most Likely Descendant. Sections 5097.98 and 5097.99 of the Public Resources Code also call for “. . . protection of Native American human burials and skeletal remains from vandalism and inadvertent destruction”. To achieve this goal, it is recommended that the construction personnel on the project be instructed as to the potential for discovery of human remains, and both the need for proper and timely reporting of such finds, and the consequences of failure thereof.

Enforcement of this existing statute would protect against significant adverse impacts on buried human or potentially human remains.

4. Mitigation Measures

No mitigation measures are required.

L. VISUAL RESOURCES

1. Characteristics of the Project

The Specific Plan contains objectives and development standards that will affect the visual quality of development that takes place under the Plan:

a. Objectives

Qualities of the visual environment identified in “Setting,” below, that would be maintained or reinforced consistent with the objectives of the Specific Plan relate to the natural environment (open lands, trees, and riparian corridors) and visual aspects of the built environment (semi-rural character of residential areas, including lot patterns, buildings, and roads). Specifically:

- Preservation of open lands: Land Use Objective 3 calls for permanent preservation of open space lands outside the Urban Growth Boundary; Neighborhood Character Objective 2 calls for preserving existing views of the surrounding undisturbed hillside areas; and Land Use Objective 2 calls for clustering homes behind Spotorno Hill and in the Golf Course Housing areas to preserve open space.
- Preservation of trees: Environmental Objective 2 calls for preserving existing mature trees whenever possible.
- Protection of riparian corridors: Environmental Objective 2 calls for preserving the riparian habitat along the Plan Area creeks.
- Semi-rural character of private development: Land Use Objective 2 calls for maintaining the existing semi-rural uses and lot patterns within infill portions of Happy Valley; Neighborhood Character Objective 1 calls also for maintaining the existing semi-rural character of the Plan Area in terms of architecture, landscaping, fencing, etc.
- Semi-rural character of public facilities: Circulation Objective 3 calls for maintaining the “country road” quality of roads within the Plan Area to the fullest extent feasible.

b. Development Standards

The Specific Plan contemplates construction of up to 136 residential units as part of new development projects, up to 43 additional housing units on infill sites, development of a municipal golf course, provision of a new road link to serve the Golf Course and some of the new residential development, and commitment of outlying lands to permanent open space. All development proposals within the Plan Area will be subject to the City’s Planned Unit Development (PUD) plan review and approval process upon annexation of the Specific Plan Area.

For each of the six Plan subareas, the Specific Plan sets forth land use standards (indicating permitted and conditional uses) and specifies some of the site development standards that will ultimately apply; the balance of those standards will be determined at the time of PUD development plan approval. Design guidelines are also specified in the Specific Plan. The design guidelines are intended to assist developers and home owners in the preparation of plans for new construction in a manner that will be consistent with the unique character of the Plan Area.

Some of the standards and guidelines that, when implemented, will help avoid adverse visual impacts include the following:

- Specification of permitted land uses to avoid land use conflict.
- Detailed design standards for Greater Happy Valley that would help insure that the size, siting, lot layout, architectural design of residences and accessory buildings, landscape planting, and fencing reflect and reinforce the existing semi-rural development pattern.
- Recognition of the semi-rural quality of Greater Happy Valley by (1) allowing, on lots of at least 40,000 square feet, the keeping of farm animals and (2) retaining and preserving old water towers, windmills, barns, and interesting agricultural structures where feasible.
- Integration of the Golf Course with the surrounding natural environment, including:
 - Avoiding grading that would present a strong contrast to the natural hill forms of the area.
 - Minimizing views of the Golf Course roads, parking lot, and service areas from offsite.
 - Designing the clubhouse and other golf-related structures to be compatible with the semi-rural character of the Happy Valley area.
 - Designing landscaping to (1) enhance the natural appearance of the area, (2) screen utilitarian buildings and service areas, and (3) ensure that lighting is subdued.
- Specification of road design standards that would be consistent with the existing character of roads within the Plan Area: maximum travel lane width of 12 feet; no parking lanes, sidewalks, or streetlights; and no curbs unless required for vehicular safety at sharp road turns.

The Specific Plan also includes the following additional standards for road design and construction:

- The Bypass Road should be constructed parallel to existing topographic contours. The only exception should be the area where the road extends over Spotorno Hill toward the Golf Course. In this area, road cut and fill contours shall reflect the natural topography, and not create geometrically engineered forms.
- No portion of the Bypass Road (including future traffic on the road) should be visible to the Greater Happy Valley area, with the exception of the portion that extends over Spotorno Hill toward the Golf Course.
- All cut and fill slopes shall be revegetated and stabilized as soon as possible after the completion of grading.

2. Setting

a. Visual Resources of the Natural Setting

The valleys of Happy Valley Creek and Sycamore Creek and the hills surrounding these two valleys make up the two visual environments of the Plan Area. These areas are visually separated by a low ridge that marks the watershed boundaries of the two streams.

(1) Happy Valley. The Happy Valley Creek watershed (the creek plain and its flanking hills) is the larger of the two visual environments. The valley is mostly open land east and south of the intersection of Happy Valley Road and Alisal Street. In this broad, relatively level area, the alignment of the creek and its tributaries is indicated by scattered clusters of oak riparian woodland. The hills are generally grass-covered with some concentrations of trees (see Figure 25, p. 119). This part of the Plan Area has a rural character that it derives from the absence of public roads (the few homes in the area are accessed by narrow private drives) and its visual isolation from settled areas, as well as from the current open condition of both valley and hillside lands.

The valley broadens as it extends northwest of the Happy Valley Road/Alisal Street intersection, although the character of the natural setting in this portion of the Plan Area is masked somewhat by existing development and associated vegetation.

(2) Spotorno Valley. The valley of Sycamore Creek, on the Spotorno property, is the smaller of the two visual environments in the Plan Area. This valley is narrower and its flanking hillsides rise more steeply from the valley floor. Sycamore Creek is bridged by a ranch road downstream of where it has been dammed to form a pond. In spite of these modifications, the stream retains a rural quality because of topographic irregularity and riparian vegetation. Two portions of this area are relatively level: a small plateau northwest of the existing ranch house and a larger bowl toward the far northeast corner of the Plan Area. Views from Spotorno Valley are contained by ridgetops in every direction but the northwest, which commands a vista toward the I-680 crossing of Bernal Avenue in west Pleasanton.

Like the open portion of Happy Valley, Spotorno Valley has a marked rural character.

b. Visual Resources of the Built Environment

(1) Happy Valley. The settled portion of Happy Valley lies mostly to the north of Happy Valley Road. Development consists of residences and associated outbuildings on ranchettes of generally from half an acre to five acres inside the Happy Valley Loop and one to fifteen acres beyond. Most of the existing buildings date from the 1970s or earlier, so that plantings associated with them have attained maturity, screening many of the buildings.

Happy Valley Road and Alisal Street, which together comprise the main portion of the Happy Valley Loop, are narrow (generally 22 feet) and without curb, gutter, and sidewalks, giving the Loop a semi-rural quality that is reinforced by the character of development. The predominant residential type is ranch-style and single-story, but there is individuality in the buildings due to their having been built at different times to different designs on various lot layouts. This overall pattern and the visual variety within it convey informality, giving development along the Happy Valley Loop an atmosphere that can be described as casual and relaxed.

(2) Spotorno Valley. Built elements of the visual environment of the Sycamore Creek valley include the ranch house, the ranch buildings, and the road and pond mentioned above. The ranch complex is testimony to the agricultural use of the area that has been continuous since Pleasanton's earliest days. Aside from the City water tank just off the site to the northwest, the ranch buildings are the only structures in the immediate viewshed of the Spotorno Valley. The ranch buildings in combination with the natural setting described above gives the area a marked rural, agricultural character.

3. Impacts

a. Significance Criteria

Impacts on visual resources would be considered significant if the Happy Valley Specific Plan would:

- Have a substantial, demonstrable negative aesthetic effect (CEQA, Appendix G (b) and Appendix I, XIII.(a)).
- Create light or glare (CEQA, Appendix I, XIII. (c)).
- Disturb ridgeline views.
- Diminish the scenic value of surrounding hills.
- Fail to maintain the semi-rural character of the neighborhood and its natural environment.

b. Impacts

(1) Change in Land Use from Open Space/Agriculture to Residential Development. Residential development proposed under the Specific Plan would affect several areas now in open space or agriculture: the Golf Course Low Density Residential areas and Spotorno Upper Valley Low Density Residential area. The former area is now partly farmed and partly in open space; the latter is in ranch use. In both cases, new housing – when considered in the context of the large open space areas that are being preserved around them – would perpetuate the semi-rural character of the Happy Valley. Appearance of the areas would change, but the change would not result in an adverse aesthetic impact.

The only area of significant change in character is the Spotorno Upper Valley Medium Density Residential area, where proposed density (five units per acre) parallels the density in more settled areas of central Pleasanton, including areas along Sunol Boulevard between Happy Valley and downtown. This area, because of its visual setting in a topographical bowl that is visually separated from the balance of the Specific Plan area, will offer a different aesthetic, but not one that is unusual in Pleasanton or that would be associated with a demonstrable negative effect.

Residential development would not violate the other aesthetic criteria set forth above: it would not create a major source of light or glare; it would not occur in visible ridgeline locations; and it would not diminish the scenic value of the ridges and hills visible from Happy Valley or elsewhere in Pleasanton. Only in the case of the Spotorno Upper Valley Medium Density Residential area might a concern about loss of vistas of open hillsides occur, since some of the MDR area is visible from the I-680 corridor in west and northwest Pleasanton. The distance is so great, however, that the potential for adverse aesthetic impact is minimal. The Specific Plan requires a visual analysis at the PUD plan review stage to evaluate

the potential impacts of development on the outlying community. The Plan further requires that measures be taken to minimize the visibility of development to the fullest extent feasible.

(2) Change in Land Use from Open Space/Agriculture to Golf Course. The Golf Course would be the principal land use in the remaining undeveloped area of Happy Valley. Consistent with golf course management, the appearance of the landscape will alter, since landscaping and irrigation patterns will conform to the arrangement of the tees, fairways, and greens rather than to existing patterns of ownership, operation, and agricultural use. However, the essential character of the Golf Course, like that of the agricultural use, will be open space, and the Specific Plan calls for golf course grading to avoid creating a strong contrast between the Course and the natural hill forms of the area. Again, there is change in appearance but no adverse aesthetic impact.

Golf Course development would not violate the other aesthetic criteria set forth above. The Specific Plan calls for minimizing views of associated roads, parking lots, and service areas from beyond the Golf Course subarea, so that the open space character of the use would be correspondingly emphasized. Utility areas are to be screened as a part of the landscaping strategy. Design of the clubhouse and any other golf-related structures is to reflect the semi-rural character of the Happy Valley area. Consistent with the Specific Plan, lighting is to be subdued and major light and glare are to be avoided.

(3) Provision of Public Facilities to Support New Development. Most of the public improvements proposed to support new development in the Specific Plan area would be subsurface; examples are the new water and sewer lines. The most prominent visible improvements would be two water tanks (see Figure 17, p. 63 for locations) and the Bypass Road (shown in Figure 2, p. 4 and other figures).

The water tanks would be large facilities, possibly visible from a distance. The Golf Course tank would be somewhat visually isolated. The Spotorno Upper Valley MDR tank would be visible from a wider area. The Specific Plan calls for all new water tanks to be located so as to avoid visibility from outlying areas to the fullest extent possible, and to incorporate other features, such as landscape screening, to minimize adverse impacts on visual resources.

The Bypass Road has been configured to minimize potential adverse visual effects. The Specific Plan calls for the alignment to parallel to existing topographic contours. The only exception should be the area where the road extends over Spotorno Hill toward the Golf Course. In this area, the Plan specifies that road cut and fill contours shall reflect the natural topography, and not create geometrically engineered forms. The Plan also specifies that no portion of the Bypass Road or future traffic on it should be visible from existing Happy Valley streets, with the exception of the portion that extends over Spotorno Hill toward the Golf Course. That stretch of road would be of limited length. Sensitive design of the road in general, and prompt revegetation of any cut or fill involved in constructing the road, particularly the visible section over the ridge between the valleys, will help to mitigate its potential adverse visual effects. By complying with the direction for road configuration, design, and construction set forth in the Specific Plan, avoidance of adverse visual effects is expected.

(4) Residential Infill Development. While the majority of new housing that could be developed under the Specific Plan would be in new developments (the Spotorno LDR area, the Spotorno MDR area, and the Golf Course LDR housing) subject to PUD plan review, some of the new housing would occur in the form of infill on existing sites in Greater Happy Valley. The Specific Plan recognizes this potential, which amounts to about 43 new units.

The Specific Plan seeks to avoid adverse impacts of this new development in several ways identified above: (1) by maintaining the same lotting patterns that characterize existing development in the area; (2) by reflecting in architecture, landscaping, and fencing the existing character of the area; (3) by retaining rural road standards; (4) by allowing (where lot size permits) the keeping of farm animals; and (5) by retaining and preserving characteristic older elements of the built environment where feasible, including old water towers, windmills, barns, and interesting agricultural structures. Detailed design standards for Greater Happy Valley will be implemented to assist in assuring that the existing semi-rural character of development will be maintained as infill occurs.

With these provisions in place, any adverse visual impacts of infill residential development would be at the less-than-significant level.

4. Mitigation Measures

No mitigation measures are required.

M. PUBLIC SERVICES: RECREATION AND PARKS

1. Characteristics of the Project

Provision of recreation facilities is a primary goal of the Happy Valley Specific Plan. One of the project's objectives is "To provide a high quality, walkable municipal golf course than can be enjoyed by the entire community." In addition to the 18-hole municipal Golf Course, practice facility, and clubhouse, the Project includes construction of trails as described in Section E of the Specific Plan and in the Trails Plan of the Pleasanton General Plan. No neighborhood or community parks included in the Specific Plan.

The Specific Plan includes the following trails, which are mapped in Figure 28:

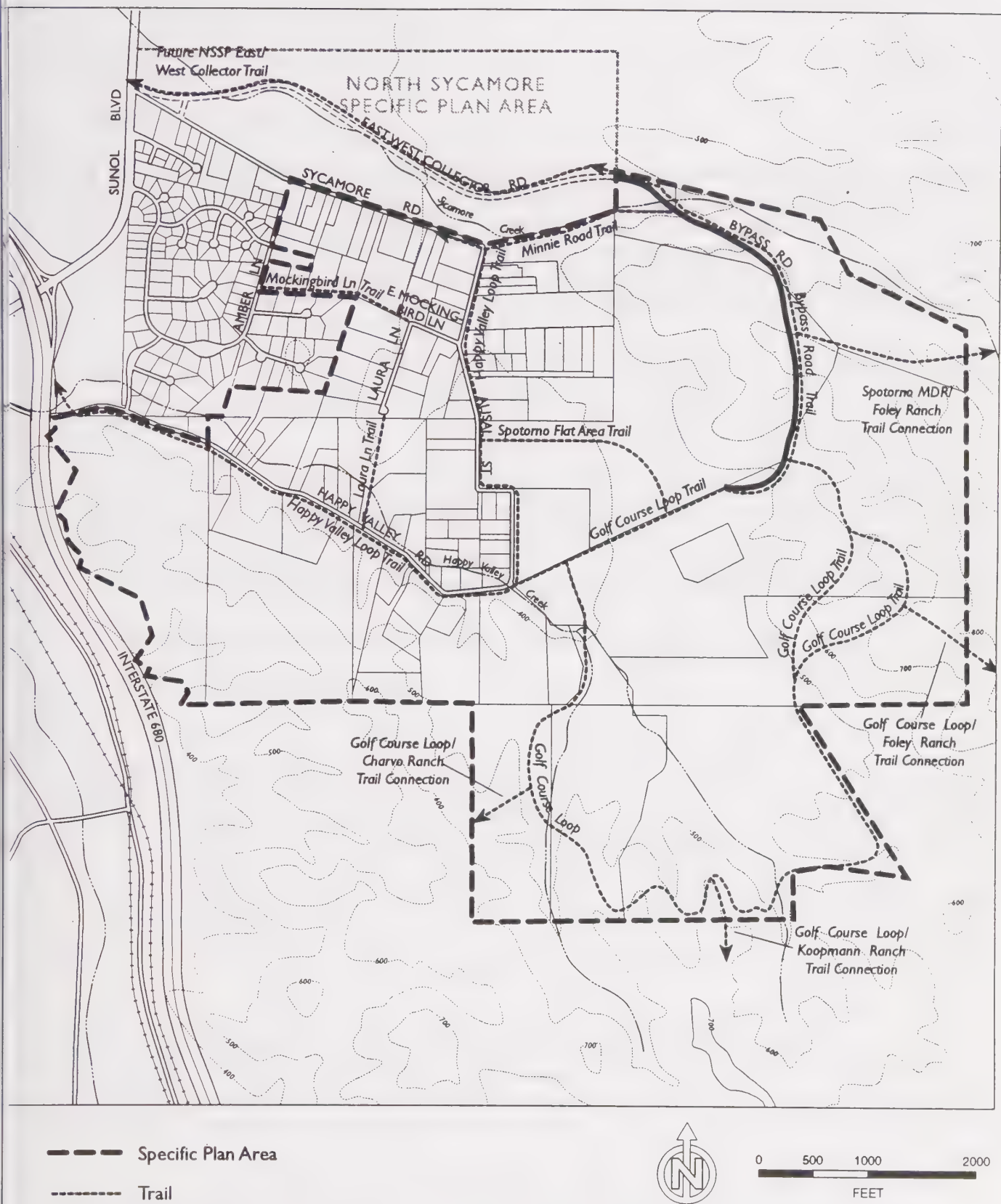
- Happy Valley Loop Trail, part of a larger loop trail system, which will be constructed within current public road rights-of-way.
- Golf Course Loop Trail, planned to circle the 18-hole Golf Course and connect to the regional trail system; and
- Bypass Road Trail, which would connect the eastern border of the North Sycamore Specific Plan Area and the Golf Course Loop Trail.

Several additional trails are proposed both within the Specific Plan area and to connect the trails within the Specific Plan area to the regional trail system shown on the East Bay Regional Park District's Master Plan. Additional trails within Happy Valley are:

- Spotorno Flat Area Trail, which would connect the Happy Valley Loop Trail on Alisal Street to the northern part of the Golf Course Loop Trail.
- Laura Lane/Happy Valley Road Trail, which would connect the south end of Laura Lane to the Happy Valley Loop Trail on Happy Valley Road.
- Mockingbird Lane Trail, which would connect the west end of Mockingbird Lane to Amber Lane, in the Carriage Hill subdivision.
- Minnie Road Trail, which would connect the Happy Valley Loop Trail at the intersection of Sycamore Road and Alisal Street to the Bypass Road Trail in the vicinity of the Spotorno Upper Valley LDR area.

Trails that would connect to the regional trail system are:

- Spotorno MDR/Foley Ranch Trail Connection, which would connect to the Bypass Road trail near the Spotorno Upper Valley MDR area.
- Golf Course Loop/Foley Ranch Trail Connection, which would connect to the eastern side of the Golf Course Loop.
- Golf Course Loop/Koopmann Ranch Trail Connection, which would connect to the south side of the Golf Course Loop.
- Golf Course Loop/Charvo Ranch connection, which would connect to the southwest side of the Golf Course Loop.



Source: City of Pleasanton

Figure 28
Happy Valley Trails Plan

2. Setting

a. Standard Parks

Recreation and park facilities located near the Plan Area are owned and operated by both the City of Pleasanton and the East Bay Regional Parks District (EBRPD). City parks are categorized by size, facility type and function. "Standard parks" are those that provide for active and passive recreation at the local level. The City's 1990 Municipal Facilities Master Plan describes standard parks as including "neighborhood parks and community active use parks, used for picnicking, children's play, organized sports, jogging, walking, playing tennis, volleyball, etc."

Neighborhood parks are desired to be within 0.5 mile from most homes within the city limits. Community active use parks are to be evenly distributed throughout the City. Guidance for provision of Standard Parks is provided by the City's standard, which is to provide five acres of standard parks per thousand population, provided relatively uniformly throughout the City.

The existing neighborhood park closest to the Plan Area is the Mission Hills Park, on Junipero Drive (8.5 acres). The nearest community active use park is Amador Valley Community Park, at the corner of Santa Rita Road and Black Avenue (23.5 acres). The closest regional park facility is the southeastern portion of Pleasanton Ridgeland Regional Park (EBRPD). Other nearby park and recreation facilities include the Pleasanton Senior Center on Sunol Boulevard, which provides open space for passive recreational use.

Planned parks in the vicinity of the project include both neighborhood and community parks on the San Francisco Water Department Bernal Property.

b. Trails

The City's General Plan and the 1996 Master Plan of the East Bay Regional Parks District both call for trails in the Plan area. Portions of three different trail systems proposed by the General Plan are within the Plan Area. These trails, described above (see "Characteristics of the Project"), are the Happy Valley Loop Trail, the Golf Course Loop Trail, and the Bypass Road Trail.

Two staging locations shown on the City's General Plan Trails Map are proposed immediately outside of the Plan Area: one just north of the eastern end of Sycamore Road, and the other just south of the southwestern edge of the Study Area.

c. Golf Course

The 18-hole municipal golf course included in the project would be one of two future 18-hole public-play golf courses in Pleasanton. The second is planned as part of the San Francisco Water Department's Bernal Property Specific Plan. Nearby courses already open to the public with 18 or more holes are located in San Ramon, Sunol, and Livermore. Private country club courses are also available in the area at Ruby Hill and the Castlewood Country Club.

The City's Municipal Facilities Master Plan indicates Pleasanton's need for one public golf course with 18 holes at a minimum, plus an additional facility of nine or eighteen holes. This assessment is based on relatively conservative guidelines established by the National Recreation and Park Association. National Golf Association guidelines, by contrast, indicate a need for three or more courses.

3. Impacts

a. Significance Criteria

Based on policies and standards in the General Plan and in the City's Municipal Facilities Master Plan, demand for community and neighborhood parks is evaluated based on four factors. The following criteria are used in evaluating the significance of project impacts on recreation and park facilities:

- Attainment of the City's standard for park acreage relative to population. The Municipal Facilities Master Plan establishes a standard of two acres of neighborhood and three acres of community active use park for each 1,000 residents.
- Provision of park facilities in proximity to housing. The General Plan calls for neighborhood parks to be generally within one-half mile of the residential areas they serve.
- Ease of access from housing to parks. Program 11.8 in the Conservation and Open Space Element of the Pleasanton General Plan notes that neighborhood parks "should not be separated from the neighborhood they serve by major arterials, commercial centers, and topographical or other features which create a direct or perceived physical barrier to the park."
- Implementation of the regional trails plan adopted by the East Bay Regional Parks District.
- Implementation of the Trails Plan of the Pleasanton General Plan.

b. Impacts of the Proposed Project

Based on the significance criteria identified above, the project could result in demand for parks and recreation facilities that is not satisfied by the project.

(1) Demand for Recreation Facilities. The 179 single-family homes that could be constructed in the Plan Area would have a buildout population of approximately 550, suggesting a demand for standard parks of approximately 2.75 acres. Since Plan Area residents will use park and recreation facilities outside of Happy Valley, distance and ease of access to other parks is particularly relevant.

Some of the new housing units and the majority of existing units in the Plan Area are or will be more than one-half mile from the nearest neighborhood park.

Because of a lack of direct street connections from Happy Valley north through the North Sycamore Specific Plan Area to existing parks, access to neighborhood parks will require use of Sunol Boulevard in the case of Mission Hills Park, and crossing Sunol Boulevard in the case of future parks on the San Francisco Water Department Bernal property. Alternatively, there will be trail access between the Plan Area and these parks in the future.

The shortage of standard parks relative to City policies is mitigated by several factors. Primary among these is the semi-rural character of the Happy Valley area. Most of the existing housing as well as most of the potential future homes would have considerable private open space associated with them, offering both potential private recreation opportunities and an open space setting. Only in the Spotorno Upper Valley MDR area, where densities would be higher, is the lot size generally less than one-half acre per

unit. The overall low density of development together with the relatively small scale of the project limits any adverse impacts on recreation and parks. The open space setting of the Plan Area, while not a substitute for active recreation facilities, offers scenic value and the opportunity to enjoy nature and exercise through use of the trails systems. Further, the proposed municipal golf course will provide a major recreational amenity within the neighborhood. These factors are reflected in the lack of interest in new Happy Valley parks among Plan Area residents, and contribute to the conclusion that the project's impact on demand for recreation and park facilities is less than significant.

An additional mitigating factor is the requirement that future developers will have to pay in-lieu park fees for development of parks elsewhere in Pleasanton. While payment of these fees will not assure the provision of parks within the Happy Valley area, it will assist the City in providing sufficient park acreage of appropriate types for all Pleasanton residents.

The only potentially feasible site for a five-acre neighborhood park within the Plan area is the Alisal Street frontage of the Spotorno Flat Area. This area, however, is not intended to be accessible to vehicular traffic on Alisal Street; instead, access is provided via the Bypass Road.

(2) Completion of Planned Trails System. The Specific Plan accommodates the completion of the planned local and regional systems by including portions of regional trails designated by the City and the East Bay Regional Parks District (Figure 28, p. 151). Construction of all designated trail segments is included in the Specific Plan.

A portion of the Golf Course Loop Trail is a regional trail in the EBRPD plan. Design and construction of the trail is required by the Specific Plan to take into account the possible hazards to hikers of errant golf balls. Since the trail will skirt the perimeter of the Golf Course and will be designed as part of the Golf Course project, there is ample opportunity to design both the trail and the course so as to minimize risks to trail users.

All Plan Area trails are to be built upon site development. Because the project will result in completion of portions of trails planned locally and regionally, the Plan will have no adverse impacts on completion of planned trails systems.

Access provided by the trail system to areas that are now in private ownership, with no public access, will increase the risk of wildfire in the area and the potential for intrusions by recreational users onto adjacent agricultural lands. The impacts associated with wildfire risk and potential intrusions are not expected to be of a scale that would require mitigation under CEQA.

(3) Provision of a Dog Run Facility. Interest in a dog run facility in Happy Valley was expressed at the environmental scoping meeting. Unleashed dog facilities are operated in public parks by numerous cities, including Livermore and Oakland. The Livermore dog run, funded in part through private contributions, is on a level half-acre of land improved with a four-foot fence, double gating, turf, and water for canine consumption. The dog run in Oakland's Hardy Park, which was constructed early in 1997, has a dirt and pavement run area with double gates.

The Park and Recreation Commission asked staff to provide information relating to the provision of such a facility in Pleasanton, and staff recommended to the Commission at its meeting November 13, 1997, that consideration be given to establishing a dog exercise area in Muirwood Community Park. Exploration of this potential project is continuing at this time.

Based on the significance criteria identified above, the lack of such a facility in Happy Valley does not constitute a significant adverse impact. The area could potentially be considered for establishment of a dog exercise area in the future, if a site is identified that meets the criteria developed by the Park and Recreation Commission when they consider such a facility at Muirwood.

4. Mitigation Measures

No significant impacts on recreation and parks are identified; therefore, no mitigation measures are required.

N. PUBLIC SERVICES: POLICE SERVICES

1. Setting

The Pleasanton Police Department provides police services within the Pleasanton city limits.

The Department has a goal of responding to all calls in an average of 18 minutes, and to emergency calls in an average of 4 minutes. It also attempts to clear at least 35 percent of cases involving Part I crimes. (Part I crimes are defined by the U.S. Department of Justice to include homicide, rape, robbery, aggravated assault, theft, burglary, and auto theft. "Case clearance" is the arrest or identification of the person responsible for such a crime.) In 1995, the Department achieved an average response time of 18.3 minutes for all calls and 3.9 minutes for emergency calls, and cleared 36 percent of its cases involving Part I crimes.

The Department is located in its own building at 4833 Bernal Avenue, occupying all of the space in that building. The *Municipal Facilities Master Plan* (p. 56) anticipates and provides for modifications to the existing facility to meet the needs of all staff expected to be required to serve Pleasanton residents and businesses when all development anticipated by the General Plan has occurred. These modifications/additions are now under construction, and include expansion of the existing building to add 7,714 additional gross square feet of building space. This new space will be provided in two areas: (1) on the west side, to be used for additional locker room and exercise facilities, and (2) on the east side, to expand the space available for Support Services, Juvenile Services Bureau, and Crime Prevention operations.

Police Department staff state that new development in the City will require additional staff to allow maintenance of current service standards. Currently-known major projects that will affect demand for police services are the Ruby Hill residential development on the east side of the City, the East Dublin/Pleasanton BART station adjacent to I-580 at Hopyard Road, and the Sears commercial development at Stoneridge Mall. In addition, ongoing infill development in Pleasanton adds demand for police services. The proposed physical modifications to the existing police facility, providing locker space for additional officers and new detention space for suspects, are those anticipated to serve the full buildout of the City's General Plan, including the Happy Valley area.

2. Impacts

To maintain response times and case clearance rates, the Police Department would need to add personnel as new development occurs. Changes in personnel are not considered an impact under CEQA unless they cause changes in the physical environment. Because changes in the police building that would be required to accommodate new staff are already included in the General Plan, the staffing changes that would result from this project would not be considered to have an impact on the environment. They would, however, intensify the existing need for implementation of the building changes that are included in the General Plan. These changes are expected to be completed in the near future.

3. Mitigation Measures

Because the expected impacts of the project would affect staffing but result in no physical changes to the environment, no mitigation measures are required.

O. PUBLIC SERVICES: FIRE PROTECTION

1. Characteristics of the Project

The Specific Plan provides for extension of the water distribution system, provision of water storage facilities, and placement of fire hydrants that will provide the opportunity for acceptable levels of fire protection to all residential structures as well as the Golf Course and clubhouse. In particular, the fire hydrants are expected generally to have a minimum capacity of 2,250 gallons per minute (gpm) at a minimum of 20 pounds per square inch residual pressure, and be installed at approximately 400-foot intervals. Water delivery to the Golf Course and clubhouse area is designed to provide fire flows of 2,000 gpm for two hours, or 240,000 gallons.

To protect new development from fire hazards, the Specific Plan requires that all residential structures located beyond the five-minute response time from the nearest fire station as well as the Golf Course clubhouse be equipped with automatic fire sprinklers and Class A fire-retardant roofing, and that new homes within the five-minute response time area be protected with at least Class B roofing. The Plan prohibits use of wood shakes and shingles on new homes and on the Golf Course clubhouse.

Residential development in the Spotorno Upper Valley LDR and MDR areas would be located adjacent to open lands, near mapped areas of high or extreme wildfire danger. Golf Course housing and residential development in the Spotorno Flat Area would also be adjacent to open lands (although not near mapped wildfire danger areas). The Specific Plan requires that, before development in these areas may occur, the City (which would own the Golf Course and open space lands) and developer(s) must prepare, and the City must approve, a Wildland/Urban Interface Management Plan that contains (1) standards for the management of vegetation at the edge of the wildland or open space area near built areas and (2) standards for the design and construction of buildings adjacent to the wildland or open space areas.

2. Setting

a. Livermore/Pleasanton Fire Department

The Livermore/Pleasanton Fire Department provides fire protection services to the City of Pleasanton. As a full service department, its services include fire emergency response, medical, rescue, fire prevention and public education. The Department works closely with the California Department of Forestry station in Sunol. It also has a mutual aid agreement with all fire departments in the Tri-Valley area under which it responds with one or more companies when requested to do so by another jurisdiction. The Department also has a Coordinated Response agreement with the City of Dublin and the Alameda County Fire Department for the Ruby Hill development and surrounding unincorporated area under which it responds simultaneously on first alarm assignment, without waiting for a mutual aid request from the responsible jurisdiction.

Services in Pleasanton are delivered from four existing stations. Station 1 is located at 4444 Railroad Avenue and is the closest existing station to the study area; Station 2 is at 6300 Stoneridge Mall Road; Station 3 is at 3200 Santa Rita Road; and Station 5 is on Vineyard Avenue in the Ruby Hill area. Each station is equipped with a fire engine and is staffed 24 hours per day by an engine company (three to four firefighters). Station 1 also houses a second engine company, pending completion of the new Station 4 (see below).

Future Station 4, which will be located in the vicinity of Bernal Avenue and Stanley Street, on the east side of the City, is expected to be operational within two years. The site for this station was purchased in September 1996, and funding for construction is in place. The station will be staffed by Engine Company #4, which is currently located with Engine Company #1 in Station 1.

The Pleasanton *Municipal Facilities Master Plan* (Master Plan) states that the Livermore/Pleasanton Fire Department is interested in relocating Fire Station Number 1. Locations that have been considered for this relocation are (1) the San Francisco Water Department's (SFWD's) Bernal Property and (2) a site owned by the City and County of San Francisco, located immediately west of the existing public library (on the north side of Old Bernal Avenue). Of the sites on the SFWD Bernal Property under consideration, the one closest to the Happy Valley area is on the eastern parcel, south of Junipero Street.

The Department has a goal of responding to all emergency calls within five minutes. In 1995, the average emergency response time was 4.26 minutes, and the Department responded to 84 percent of structure fire calls within its five-minute target time. In that year, Department personnel responded to 244 fire incidents and 2,902 total incidents (of which 1,724 were medical calls and 142 were mutual aid/contract calls).

The City of Pleasanton has adopted a Growth Management Program, which is intended to insure the adequacy of City facilities and services to serve new development as it occurs. This program relies on the regulation of construction phasing/timing to assure that facilities are available as they are needed.

b. Fire Protection in Unincorporated County Areas near Pleasanton

The County of Alameda provides fire protection in unincorporated areas of the County. In the vicinity of the study area, fire protection is currently delivered from the California Department of Forestry and Fire Protection (CDFF) station in Sunol. The station is equipped with a fire engine that is owned by the County and staffed by CDFF under a contract with the County, which pays for two of the three firefighters (per shift) stationed there. The CDFF station responds to structural fires in the community of Sunol. It also responds to some wildland fires.

The Livermore/Pleasanton Fire Department provides fire protection to the unincorporated areas of Happy Valley, Castlewood (south of the City west of I-680), and the Remen Tract (in the vicinity of Vineyard and Bernal Avenues).

c. Wildfire Risk

According to the Pleasanton General Plan, portions of the open space areas located south of Happy Valley Road and planned residential areas in the northeast corner of the Spotorno property are situated in "High" and "Extreme" fire hazard areas. These locations are mapped in the General Plan (Figure V-6, p. V-37).

3. Impacts

a. Impacts Related to New Development

The Specific Plan indicates that the southern portion of the Plan Area is beyond the five-minute response time from the nearest station (Station 1). Even if this station is moved to the southerly candidate site on the SFWD Bernal property, some areas of Happy Valley will remain beyond the five-minute response target.

As noted above (“Characteristics of the Project”), the Specific Plan contains requirements for sprinklering of new buildings and use of certain roofing materials, and prohibits use of wood shakes and shingles on structures in the Plan Area. These requirements will mitigate the potential impact of new development beyond the five-minute response time radius to a less-than-significant level.

b. Impacts Related to Wildfire Exposure

Residential development in the Spotorno Upper Valley Medium Density Residential area will be located near an area of high wildfire risk. The Specific Plan’s requirements for preparation and approval of a Wildland/Urban Interface Management Plan will mitigate the risk in this location to an acceptable level.

4. Mitigation Measures

No significant impacts are identified; therefore, no mitigation measures are required.

CHAPTER 4

ALTERNATIVES TO THE PROPOSED PROJECT

The California Environmental Quality Act requires that alternatives to a proposed project be considered in the EIR.

A. OVERVIEW OF ALTERNATIVES

Five land use alternatives (Alternatives 1 through 5) and one locational alternative (Alternative 6) were defined for this EIR. Each is described below. The land use, housing capacity, and access characteristics of the five land use alternatives are compared to those of the proposed Specific Plan in Tables 28, 29, and 30.

1. **No Project.** The Happy Valley Specific Plan area would not be annexed to the City of Pleasanton, and would remain in agricultural and large-lot residential use. There would be no golf course, no infrastructure extensions, and no new housing.
2. **Current Pleasanton General Plan/Golf Course and Two-acre Density Throughout the Happy Valley Loop.** The Happy Valley Specific Plan area would be annexed to the City of Pleasanton. New development in the area would include an 18-hole municipal Golf Course, Low-Density Residential development (one unit per two acres) in the Greater Happy Valley area, and two residential areas – a five-acre area of Low-Density Residential and a 15-acre area of Medium-Density Residential, similar to those designated in the proposed project – in the Spotorno Upper Valley areas. A total of 138 new housing units could be accommodated by this alternative.

Access to the Golf Course and Golf Course Housing would be via the Happy Valley Loop; access to the Spotorno Upper Valley areas would be via a connection to the end of the East/West Collector in the North Sycamore Specific Plan area.

3. **One-Acre Density Inside Happy Valley Loop/General Electric Property.** An expanded area (95 additional acres) of Happy Valley would be annexed to the City of Pleasanton. Development would be similar to the proposed project; the main differences being that the Golf Course would be expanded onto a 15-acre portion of the adjacent General Electric property, trails would be extended onto the General Electric and Koopmann properties, and residential density inside the Happy Valley Loop would be one unit per acre instead of one unit per two acres. This alternative would allow for the development of up to 211 new housing units (including those in the Spotorno Upper Valley LDR and MDR areas).

Access to the Golf Course, Golf Course Housing, Spotorno Flat area, and Spotorno Upper Valley would be via a connection to the east end of the East/West Collector in the North Sycamore Specific Plan area (this alignment is the same as in the proposed project).

4. **One-Acre Density Throughout the Happy Valley Loop.** The Happy Valley Specific Plan area would be annexed to the City of Pleasanton. Development would be similar to the proposed project except that the residential density both inside and outside the Happy Valley Loop and in the Spotorno Flat Area would be one acre instead of two acres. This modification would

allow for the development of as many as 274 new homes (including those in the Spotorno Upper Valley LDR and MDR areas).

Access to the Golf Course, Golf Course Housing, Spotorno Flat Area, and Spotorno Upper Valley would be via a connection to the east end of the East/West Collector in the North Sycamore Specific Plan area, as in the proposed project and Alternative 3.

Table 28
Land Uses of the Project and Alternatives

Area/Acreage	Land Use With:					
	Proposed Project	Alt. 1 No Project	Alt. 2 Current Pleasanton General Plan	Alt. 3 1-acre Density Inside Loop/G.E. Property	Alt. 4 1-acre Density Inside and Outside Loop	Alt. 5 Alameda County General Plan
Spotorno Upper Valley MDR 15 acres	MDR 5 du/a.	Ag	MDR 5 du/a.	MDR 5 du/a.	MDR 5 du/a.	Ag
Spotorno Upper Valley LDR 5 acres	LDR 1 du/a.	Ag	LDR 1 du/a.	LDR 1 du/a.	LDR 1 du/a.	LDR 1-4 du/a.
Golf Course LDR 20 acres	LDR 2 du/a.	Ag	Golf	LDR 2 du/a.	LDR 2 du/a.	LDR 1-4 du/a.
Greater Happy Valley Inside Loop (121 acres)	SRDR 0.5 du/a.	SRDR	SRDR 0.5 du/a.	SRDR 1 du/a.	SRDR 1 du/a.	LDR 1-4 du/a.
Outside Loop (158 acres)	SRDR ¹ 0.5 du/a.	SRDR	SRDR 0.5 du/a.	SRDR ¹ 0.5 du/a.	SRDR 1 du/a.	LDR 1-4 du/a.; Ag
Golf Course 165 acres ²	Golf	Ag	Golf/ Open Space	Golf	Golf	LDR 1-4 du/a.
Open Space 376 acres ³	Open Space	Ag	Open Space	Open Space	Open Space	Ag

¹ Plus 6 additional units for the 33-acre Spotorno Flat Area and 1 additional unit for the 6.4-acre developable portion of Lot 110 in exchange for substantial open space contribution.

² Plus 15 acres in Alternative 3.

³ Plus 80 acres in Alternative 3.

Land Use Abbreviations:

SRDR: Semi-Rural Density Residential

LDR: Low Density Residential

MDR: Medium Density Residential

Ag: Agriculture

OS: Open space (open space for public health and safety, with or without Wildlands Overlay)

n.a: not applicable

Source: City of Pleasanton and Mundie & Associates

5. **Alameda County General Plan Concept.** The Happy Valley Specific Plan area would not be annexed to the City of Pleasanton, but infrastructure (water, sewer, storm drainage, etc.) that permits new development would be installed (either privately or by the County). Development would be permitted as shown in the Alameda County General Plan. The County Plan allows Low Density Residential uses, at densities of one to four units per acre, throughout most of Happy Valley. The remaining outlying hilly land, including most of the Spotorno property (all of the Upper Valley MDR area and part of the Spotorno Flat Area), is designated as Large Parcel Agriculture (one housing unit per 100 acres). No golf course would be developed. This alternative would permit the construction of up to 890 new housing units.

Vehicular access to the study area would be via the Happy Valley Loop.

Table 29
New Housing Unit Potential: Proposed Project and Alternatives

Area/Acreage	Number of Housing Units					
	Proposed Project	Alt. 1 No Project	Alt. 2 Current Pleasanton General Plan	Alt. 3 1-acre Density Inside Loop/G.E. Property	Alt. 4 1-acre Density Inside and Outside Loop	Alt. 5 Alameda County General Plan
Spotorno Upper Valley MDR 15 acres	75	0	75	75	75	0
Spotorno Upper Valley LDR 5 acres	5	0	5	5	5	11
Golf Course LDR 20 acres	34	0	0	34	34	50
Greater Happy Valley Inside Loop (121 acres)	13	0	13	45	45	148
Outside Loop (158 acres)	52	0	45	52	115	359
Golf Course 165 acres	n.a.	n.a.	n.a.	n.a.	n.a.	322 (130 acres)
Open Space 376 acres	0	0	0	0	0	0
Total Plan Area	179	0	138	211	274	890

n.a: not applicable

Source: City of Pleasanton and Mundie & Associates

Table 30
Access Characteristics of the Project and Alternatives

Area	Access Routes					
	Proposed Project	Alt. 1 No Project	Alt. 2 Current Pleasanton General Plan	Alt. 3 1-acre Density Inside Loop/G.E. Property	Alt. 4 1-acre Density Inside and Outside Loop	Alt. 5 Alameda County General Plan
Spotorno Upper Valley MDR	Bypass	Loop	Bypass	Bypass	Bypass	Loop
Spotorno Upper Valley LDR	Bypass	Loop	Bypass	Bypass	Bypass	Loop
Golf Course LDR	Bypass	Loop	Loop	Bypass	Bypass	Loop
Greater Happy Valley Inside Loop	Loop	Loop	Loop	Loop	Loop	Loop
Spotorno Flat Area	Bypass	Loop	Loop	Bypass	Bypass	Loop
Other Outside Loop	Loop	Loop	Loop	Loop	Loop	Loop
Golf Course	Bypass	Loop	Loop	Bypass	Bypass	Loop
Open Space	Loop	Loop	Loop	Loop	Loop	Loop

"Bypass" Bypass Road
"Loop" Happy Valley Loop

Source: City of Pleasanton and Mundie & Associates

- 6. Alternate Location.** CEQA requires that EIRs consider at least one alternate location for the proposed project. In this case, the Specific Plan is intended to guide land uses particularly in the Happy Valley area of Pleasanton. Therefore, an alternate location would not be possible and this alternative is not considered further.

The traffic characteristics of the proposed project and alternatives, and their impacts on study area intersections, are summarized in Tables 31, 32, and 33. Table 31 compares the trip generation characteristics of the proposed project to those of Alternative 1 (no project), Alternative 4 (one-acre density inside and outside the Happy Valley Loop), and Alternative 5 (Alameda County General Plan). Alternatives 2 and 3 are omitted because the amount of traffic they generate would be of a magnitude between that of the proposed project and Alternative 4.

Table 31
Peak Hour Project Trip Generation: Alternatives

Land Use	Size	A.M. Peak Hour					P.M. Peak Hour				
		Trip Rate	In:Out Ratio	VTE ¹			Trip Rate	In:Out Ratio	VTE ¹		
				In	Out	Total			In	Out	Total
Proposed Project											
Single-Family	179 du ²	0.80	30:70	43	100	143	1.00	70:30	125	54	179
Golf Course	1	40	90:10	36	4	40	40	70:30	28	12	40
Total				79	104	183			153	66	219
Alternative 1: No Project											
Single-Family	0 du	0.80	30:70	-	-	-	1.00	70:30	-	-	-
Golf Course	0	40	90:10	-	-	-	40	70:30	-	-	-
Total				0	0	0			0	0	0
Alternative 4: 1-acre Density Inside and Outside Loop											
Single-Family	274 du	0.80	30:70	66	153	219	1.00	70:30	192	82	274
Golf Course	1	40	90:10	36	4	40	40	70:30	28	12	40
Total				102	157	259			220	94	314
Alternative 5: Alameda County General Plan											
Single-Family	890 du	0.80	30:70	214	498	712	1.00	70:30	623	267	890
Golf Course	0	40	90:10	-	-	-	40	70:30	-	-	-
Total				214	498	712			623	267	890

1 VTE = vehicle trip ends

2 du = dwelling units; golf course site = 18 holes.

Source: TJKM Traffic Consultants, Inc.

Tables 32 and 33 compare intersection levels of service in the future with full development permitted by each alternative. Table 32 provides information about conditions with construction of the West Las Positas/I-680 interchange ("With WLP"); Table 33 provides similar information but assumes no West Las Positas/I-680 interchange ("Without WLP"). The results are discussed in the section on each alternative later in this chapter.

Table 32
Summary of Intersection Levels of Service: With WLP Interchange

ID	Intersection Location	Peak Hour	Existing		Future Setting		Future Setting + Proposed Project		Future Setting + Alternative 1		Future Setting + Alternative 4		Future Setting + Alternative 5	
			V/C*	LOS	V/C*	LOS	V/C*	LOS	V/C*	LOS	V/C*	LOS	V/C*	LOS
1	Pleasanton-Sunol Rd./ Happy Valley Rd.(U)	A.M.	2.9	A	3.0	A	3.0	A	3.1	A	3.0	A	3.6	A
		P.M.	3.3	A	3.5	A	3.3	A	3.7	A	3.5	A	4.3	A
342	Sunol Blvd./ Bernal Ave.(S)	A.M.	0.61	B	0.88	D	0.88	D	0.88	D	0.88	D	0.89	D
		P.M.	0.61	B	0.87	D	0.87	D	0.86	D	0.87	D	0.89	D
352	I-680 SB Ramps/ Bernal Ave.(S)	A.M.	0.64	B	0.76	C	0.76	C	0.76	C	0.76	C	0.76	C
		P.M.	0.51	A	0.78	C	0.78	C	0.78	C	0.78	C	0.78	C
353	Valley Ave./ Bernal Ave.(S)	A.M.	0.65	B	0.61	B	0.61	B	0.61	B	0.61	B	0.61	B
		P.M.	0.53	A	0.66	B	0.66	B	0.66	B	0.66	B	0.66	B
354	I-680 NB Ramps/ Bernal Ave.(S)	A.M.	0.50	A	0.62	B	0.62	B	0.62	B	0.62	B	0.63	B
		P.M.	0.68	B	0.72	C	0.72	C	0.72	C	0.72	C	0.72	C
447	Sunol Blvd./ Sycamore Rd.(S)	A.M.	0.76	C	0.66	B	0.68	B	0.65	B	0.68	B	0.72	C
		P.M.	0.85	D	0.82	D	0.83	D	0.77	C	0.84	D	0.86	D
497	Sunol Blvd./ Junipero St.(S)	A.M.	0.55	A	0.80	C	0.80	C	0.79	C	0.80	C	0.81	D
		P.M.	0.57	A	0.81	D	0.81	D	0.81	D	0.82	D	0.83	D
970	I-680 NB Ramps/ Sunol Blvd.(S)	A.M.	0.53	A	0.67	B	0.66	B	0.66	B	0.68	B	0.76	C
		P.M.	0.81	D	0.59	A	0.58	A	0.58	A	0.59	A	0.69	B
971	I-680 SB Ramps/ Sunol Blvd.(S)	A.M.	0.74	C	0.65	B	0.64	B	0.65	B	0.65	B	0.71	C
		P.M.	0.47	A	0.72	C	0.73	C	0.66	B	0.74	C	0.84	D

Notes:

* Volume-to-capacity (V/C) ratio for signalized intersections, average delay in seconds/vehicle for the delayed movements on unsignalized intersections.

(S) Signalized intersection

(U) STOP-controlled (unsignalized) intersection

Source: TJKM Traffic Consultants, Inc.

Table 33
Summary of Intersection Levels of Service: Without WLP Interchange

ID	Intersection Location	Peak Hour	Existing		Future Setting		Future Setting + Proposed Project		Future Setting + Alternative 1		Future Setting + Alternative 4		Future Setting + Alternative 5	
			V/C*	LOS	V/C*	LOS	V/C*	LOS	V/C*	LOS	V/C*	LOS	V/C*	LOS
1	Pleasanton-Sunol Rd./ Happy Valley Rd.(U)	A.M.	2.9	A	3.0	A	3.0	A	3.1	A	3.0	A	3.6	A
		P.M.	3.3	A	3.5	A	3.3	A	3.7	A	3.5	A	4.3	A
342	Sunol Blvd./ Bernal Ave.(S)	A.M.	0.61	B	0.89	D	0.89	D	0.88	D	0.89	D	0.90	D
		P.M.	0.61	B	0.87	D	0.88	D	0.87	D	0.88	D	0.90	D
352	I-680 SB Ramps/ Bernal Ave.(S)	A.M.	0.64	B	0.75	C	0.75	C	0.75	C	0.75	C	0.75	C
		P.M.	0.51	A	0.83	D	0.83	D	0.83	D	0.83	D	0.83	D
353	Valley Ave./ Bernal Ave.(S)	A.M.	0.65	B	0.81	D	0.81	D	0.81	D	0.81	D	0.82	D
		P.M.	0.53	A	0.86	D	0.86	D	0.86	D	0.86	D	0.86	D
354	I-680 NB Ramps/ Bernal Ave.(S)	A.M.	0.50	A	0.74	C	0.74	C	0.73	C	0.74	C	0.74	C
		P.M.	0.68	B	0.87	D	0.87	D	0.87	D	0.87	D	0.87	D
447	Sunol Blvd./ Sycamore Rd.(S)	A.M.	0.76	C	0.66	B	0.68	B	0.65	B	0.68	B	0.72	C
		P.M.	0.85	D	0.83	D	0.84	D	0.78	C	0.85	D	0.87	D
497	Sunol Blvd./ Junipero St.(S)	A.M.	0.55	A	0.81	D	0.81	D	0.80	C	0.81	D	0.82	D
		P.M.	0.57	A	0.82	D	0.83	D	0.82	D	0.83	D	0.84	D
970	I-680 NB Ramps/ Sunol Blvd.(S)	A.M.	0.53	A	0.68	B	0.67	B	0.66	B	0.68	B	0.77	C
		P.M.	0.81	D	0.59	A	0.58	A	0.59	A	0.60	A	0.69	B
971	I-680 SB Ramps/ Sunol Blvd.(S)	A.M.	0.74	C	0.64	B	0.64	B	0.64	B	0.65	B	0.71	C
		P.M.	0.47	A	0.71	C	0.72	C	0.65	B	0.74	C	0.83	D

Notes:

- * Volume-to-capacity (V/C) ratio for signalized intersections, average delay in seconds/vehicle for the delayed movements on unsignalized intersections.
- (S) Signalized intersection
- (U) STOP-controlled (unsignalized) intersection

Source: TJKM Traffic Consultants, Inc.

B. ANALYSIS OF ALTERNATIVES

1. Alternative 1: No Project

a. Description

In the No Project alternative, the Happy Valley Specific Plan area would not be annexed to the City of Pleasanton, and would remain in agricultural and large-lot residential use. There would be no golf course, no infrastructure extensions, and no new housing.

b. Impacts

This alternative would be consistent with the continuation of existing conditions. There would be no impacts on land use, transportation, noise, air quality, drainage, biological resources, visual resources, cultural resources, or public services.

2. Alternative 2: Current Pleasanton General Plan

a. Description

The Happy Valley Specific Plan area would be annexed to the City of Pleasanton. New development in the area would include an 18-hole municipal Golf Course, low-density residential development (density of one unit per two acres) in the Spotorno Flat and Greater Happy Valley areas, and residential densities similar to those designated in the proposed project in the Spotorno Upper Valley areas. A total of 138 new housing units could be accommodated by this alternative. Access to the Spotorno Upper Valley area would be via a connection to the end of the East/West Collector in the North Sycamore Specific Plan (similar to the access alignment in the proposed project).

b. Impacts

(1) Land Use. Land use impacts would be similar to those of the proposed project. The major difference would be that Alternative 2 would not include any homes on the Golf Course.

Cumulative Impact A1. Conversion of land from agricultural to urban use.

Same as with the proposed project.

(2) Transportation. The assumptions used to distribute traffic associated with Alternative 2 to area roads are summarized in Table 34. This distribution provides the basis for the level of service results included in Tables 32 and 33.

(a) Intersection Levels of Service. Conditions at all study area intersections except one would be similar to conditions with development permitted by the proposed project (same level of service) with the West Los Positas interchange; conditions would be similar at all intersections except three without the interchange. Because all levels of service are acceptable according to City standards, no mitigation would be required for any transportation conditions.

(b) Roadway Segments. Traffic on all roadway segments is shown in Figure 13 (p. 42). The future traffic volumes on the study roadways would not increase beyond 3,000 vpd; therefore, there are no significant impacts.

Table 34
Daily Trip Generation and Assignment: Alternative 2

	Golf Course Properties	Spotorno Upper Valley	Greater Happy Valley Area	Total	
Land Use	Golf Course	MDR	LDR		
Size	18 holes	75 du	5 du	58 du	
ADT Trip Rate	37.59	10	12.8	12.8	
Total	677	750	64	742	
Percent of Project Traffic on Roadway Segment:					
1	50.0%	100.0%	100.0%	30.4%	61.7%
2	0.0%	0.0%	0.0%	30.4%	25.3%
3	50.0%	100.0%	100.0%	0.0%	36.5%
4	50.0%	0.0%	0.0%	28.3%	24.6%
5	50.0%	0.0%	0.0%	28.3%	24.6%
6	50.0%	0.0%	0.0%	28.3%	24.6%
7	50.0%	0.0%	0.0%	69.6%	38.3%
8	50.0%	0.0%	0.0%	69.6%	38.3%
Project Traffic Volumes on Roadway Segment:					
1	338	750	64	226	1,378
2	0	0	0	226	564
3	338	750	64	0	814
4	338	0	0	210	548
5	338	0	0	210	548
6	338	0	0	210	548
7	338	0	0	516	855
8	338	0	0	516	855

Source: TJKM Transportation Consultants

(3) Noise. Noise levels would increase by 4 dBA along Happy Valley Road, 2 dBA along Alisal Street, and 1 dBA along Sycamore Road between Alisal Street and the intersection of the East/West Collector and Sycamore Road. Between the intersection of the East/West Collector and Sunol Boulevard, noise levels along Sycamore Road would increase by 6 dBA. Noise level increases would be considered significant along Happy Valley Road and along the East/West Collector between its intersections with Sycamore Road and Sunol Boulevard.

Impact C1. Increase in noise levels as a result of increased traffic associated with new development.

Traffic associated with buildout of the Specific Plan would increase noise levels by more than 3 dBA along Happy Valley Road.

(4) Biology. Development consistent with this alternative would not include the Bypass Road between the Spotorno Upper Valley MDR residential area and the Golf Course area (including the Golf Course Housing), and thus would avoid some potential impacts on jurisdictional wetlands and waters of the U.S. in this area. As a result, this alternative would require less regulation than is included in the proposed Specific Plan to avoid adverse impacts.

The footprint of the Golf Course under Alternative 2 is slightly smaller than in the Specific Plan. The difference in acreage would be open space, thereby slightly reducing the potential for impacts on jurisdictional wetlands and waters of the U.S. and on heritage trees. The recommended mitigation measure for the proposed project would be applicable to this alternative as well.

(5) Other Impacts. All other impacts would be similar to those of the proposed project.

3. Alternative 3: One-Acre Density Inside the Happy Valley Loop/ General Electric Property

a. Description

An expanded area (95 additional acres of the Happy Valley area) would be annexed to the City of Pleasanton: 25 acres on the east side of the Project Area currently owned by the General Electric Company and 70 acres on the south side of the project area currently owned by Koopmann. Development would be similar to the proposed project; the main differences are that (1) the Golf Course would be expanded into a 15-acre portion of the adjacent the General Electric Company property, (2) trails would be extended into the adjacent General Electric and Koopmann properties, and (3) the minimum residential lot size inside the Happy Valley Loop would be one acre instead of two acres. The total potential for new housing units, including those in the Spotorno Upper Valley LDR and MDR areas, is increased to 211, compared to 179 in the proposed project and 138 in Alternative 2. Access in the Spotorno Upper Valley area would be via a connection to the end of the East/West Collector in the North Sycamore Specific Plan (similar to the proposed project and Alternative 2).

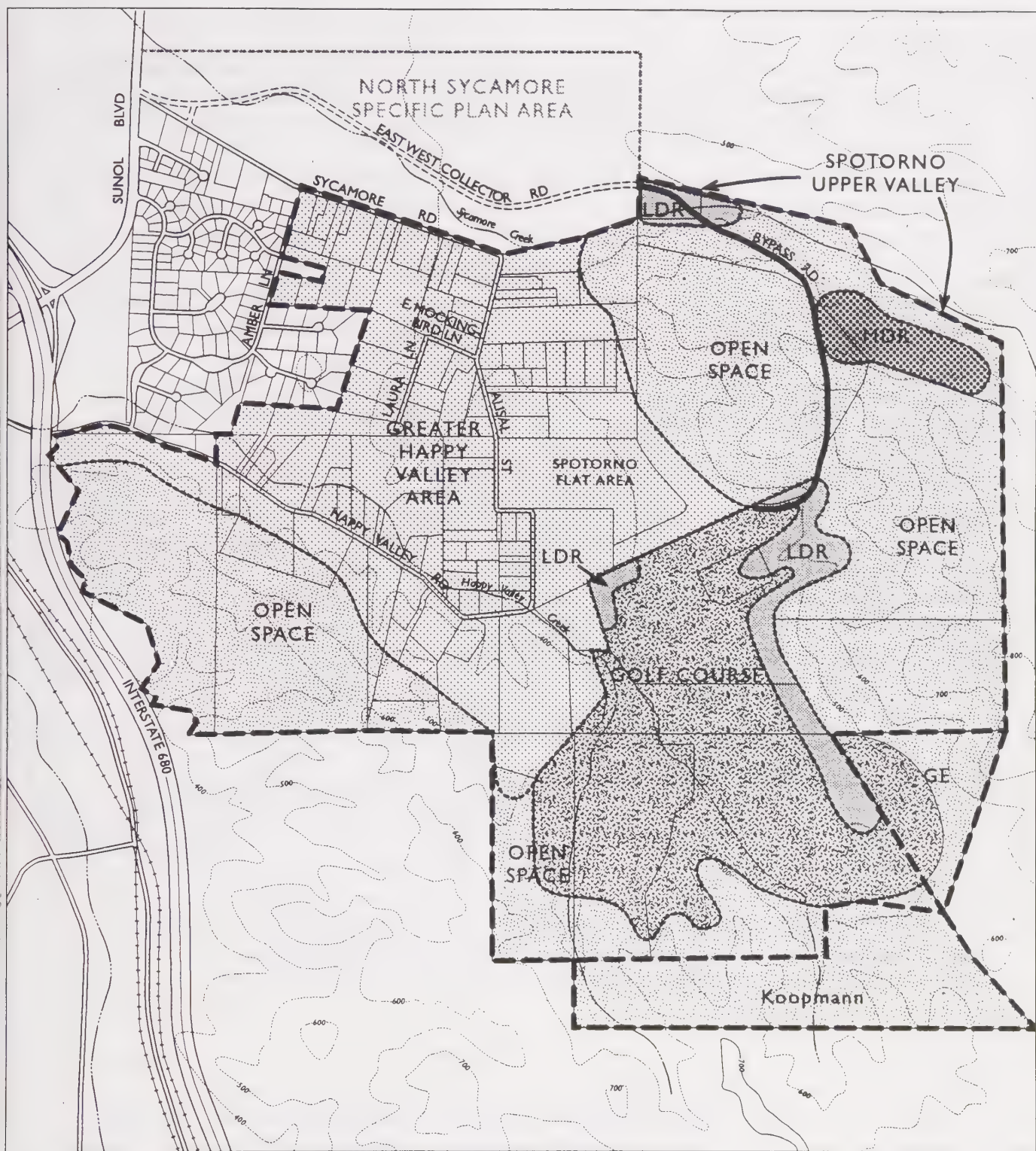
The area and land use pattern for Alternative 3 are shown in Figure 29. The trail system for Alternative 3 is compared to the trail system described by the Specific Plan in Figure 30.

b. Impacts

(1) Land Use. Land use impacts would be similar to those of the proposed project, except that the density for residential development inside the Happy Valley Loop would be increased. Alternative 3, like the proposed Specific Plan but unlike Alternative 2, would include homes on the Golf Course. Approximately 15 acres of the General Electric property, currently in agricultural use (grazing), would be used for the Golf Course.

Cumulative Impact A1. Conversion of land from agricultural to urban use.

Same as with the proposed project and Alternative 2, except that an additional 15 acres of land would be converted..






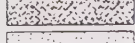
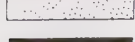
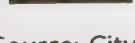
-  Semi-Rural Density Residential (generally 1 unit/2 acres)
-  Low Density Residential (2 units/acre)
-  Medium Density Residential (5 units/acre)
-  Golf Course
-  Open Space
-  Bypass Road



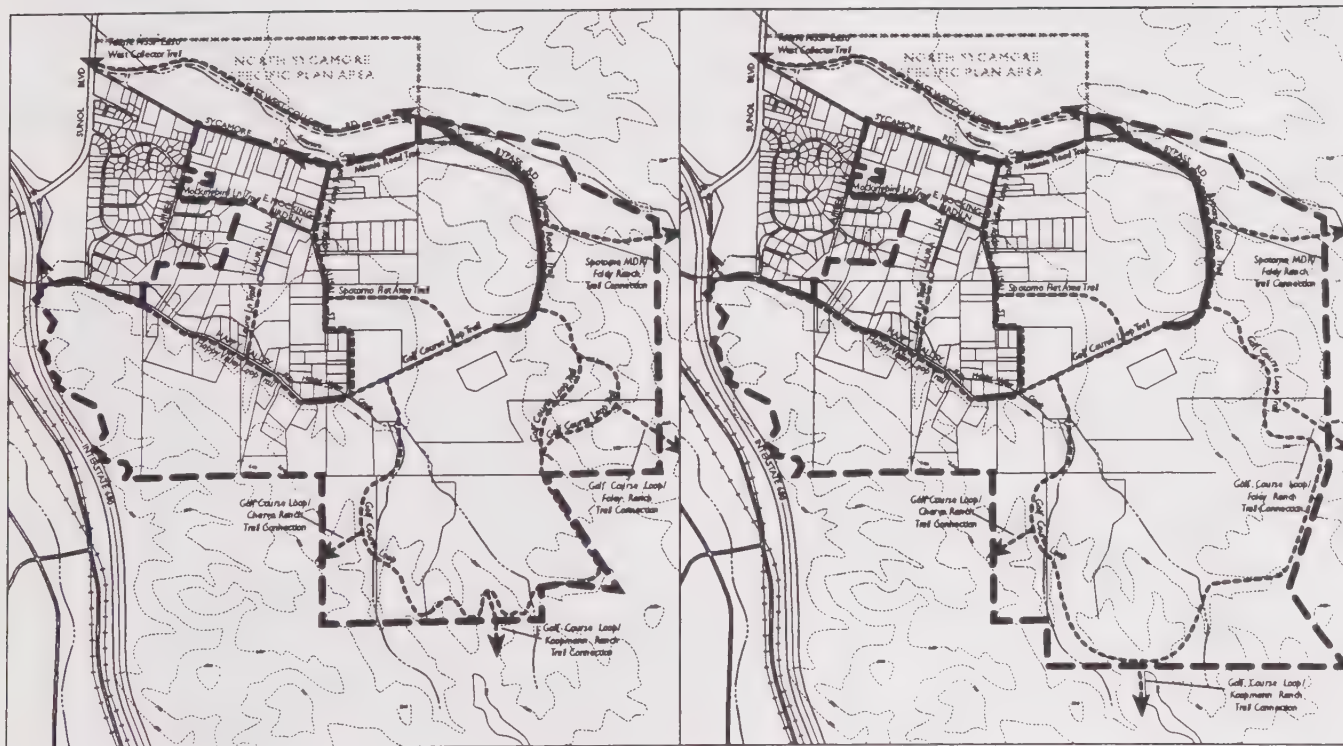
Figure 29

Alternative 3: Land Use Pattern and Circulation System

Source: City of Pleasanton

The Project

Alternative 3



- Specific Plan Area
- Trail



Figure 30
Alternative 3: Trails Plan
Compared to Trails in the Project

Source: City of Pleasanton

(2) Transportation. No specific transportation analysis was performed for Alternative 3, because the level of development would be between the amount permitted by the proposed project and the amount permitted by Alternative 4. Impacts described for Alternative 4 apply to this alternative as well.

(3) Noise. Noise level increases under this alternative would be 5 dBA along Happy Valley Road, 3 dBA along Alisal Street, 1 dBA along Sycamore Road between Alisal Street and the East/West Collector intersection, and 7 dBA along the East/West Collector between the intersection of the Sycamore Road and Sunol Boulevard. Some of these noise level increases would be significant.

Impact C1. Increase in noise levels as a result of increased traffic associated with new development.

Traffic associated with buildout of the Specific Plan would increase noise levels by more than 3 dBA along Happy Valley Road and along the East/West Collector between the intersection of Sycamore Road and Sunol Boulevard.

(4) Biology. The GE Company property and the Koopmann property are in the watershed of Happy Valley, and are thus identical to the plant communities and wildlife habitats of the biological resources study area mapped in Figure 24 (p. 117). In Alternative 3, the golf course would be expanded to occupy 15 acres of the GE property and the southern portion of the Golf Course Loop trail would be located on the Koopmann property. These features would potentially extend impacts of the proposed project to this expanded area. Specific Plan mitigation requirements for biological resources would also be applicable to this alternative.

(5) Other Impacts. All other impacts would be similar to those of the proposed project.

4. Alternative 4: One-Acre Density Inside and Outside the Happy Valley Loop

a. Description

The Happy Valley Specific Plan area would be annexed to the City of Pleasanton. Development would be similar to the proposed project; the difference is that the residential density both inside and outside the Happy Valley Loop would be one home per one acre instead of two acres. This modification would allow for the development of as many as 274 new homes, including those in the Spotorno Upper Valley LDR and MDR areas.

b. Impacts

(1) Land Use. Land use impacts would be similar to those of the proposed project, but approximately twice as many new housing units would be permitted in the Greater Happy Valley.

Cumulative Impact A1. Conversion of land from agricultural to urban use.

Same as with the proposed project and Alternative 2.

(2) Transportation. The assumptions used to distribute traffic associated with Alternative 4 (as shown in Table 31) to area roads are summarized in Table 35. This distribution provides the basis for the level of service results included in Tables 32 and 33.

Table 35
Daily Trip Generation and Assignment: Alternative 4

	Golf Course Properties		Spotorno Upper Valley		Greater Happy Valley Area	Total
Land Use	Golf Course	LDR	MDR	LDR	LDR	
Size	18 holes	34 du	75 du	5 du	160 du	
ADT						
Trip Rate	37.59	12.8	10	12.8	12.8	
Total	677	435	750	64	2,048	3,974
Percent of Project Traffic on Roadway Segment:						
1	100.0%	100.0%	100.0%	100.0%	43.2%	70.8%
2	0.0%	0.0%	0.0%	0.0%	22.6%	11.7%
3	100.0%	100.0%	100.0%	100.0%	20.6%	59.1%
4	0.0%	0.0%	0.0%	0.0%	17.9%	9.2%
5	0.0%	0.0%	0.0%	0.0%	17.9%	9.2%
6	0.0%	0.0%	0.0%	0.0%	17.9%	9.2%
7	0.0%	0.0%	0.0%	0.0%	56.8%	29.2%
8	0.0%	0.0%	0.0%	0.0%	56.8%	29.2%
Project Traffic Volumes on Roadway Segment:						
1	677	435	750	64	886	2,812
2	0	0	0	0	463	463
3	677	435	750	64	422	2,348
4	0	0	0	0	366	366
5	0	0	0	0	366	366
6	0	0	0	0	366	366
7	0	0	0	0	1,162	1,162
8	0	0	0	0	1,162	1,162

Source: TJKM Transportation Consultants

(a) Intersection Levels of Service. Conditions at all study area intersections would be similar to conditions with development permitted by the proposed project (same level of service).

(b) Roadway Segments. The future traffic volumes on the study roadways would not increase beyond 3,000 vpd; therefore, there are no significant impacts.

(3) Noise. Noise level increases under Alternative 4 would be the same as under Alternative 3.

Impact C1.	Increase in noise levels as a result of increased traffic associated with new development.
	Same as Alternative 3.

(4) Other Impacts. All other impacts would be similar to those of the proposed project.

5. Alternative 5: Alameda County General Plan

a. Description

The Happy Valley Specific Plan area would not be annexed to the City of Pleasanton, but infrastructure (water, sewer, storm drainage, etc.) that permits new development would be installed (either privately or by the County). Development would be permitted as shown in the Alameda County General Plan. The County Plan allows Low Density Residential uses, at densities of one to four units per acre, throughout most of Happy Valley. The remaining outlying hilly land, including most of the Spotorno property, is designated as Large Parcel Agriculture (one housing unit per 100 acres). No golf course would be developed. This alternative would permit the construction of up to 890 new housing units. Access to all developed areas residential and golf course) would be via the Happy Valley Loop (there would be no Bypass Road).

External roadway network assumptions are as proposed the City's General Plan. Within the project site, no circulation improvements are planned.

b. Impacts

(1) Land Use. Residential development at typical suburban densities would be permitted throughout the Greater Happy Valley Area, including in the Golf Course Housing areas and some of the Spotorno Flat Area. Such residential development would have the following impacts:

Impact A1.	Potential for conflicts between residential use and agricultural activities.
	Conflicts could occur as a result of intrusions onto agricultural lands by residents and/or their pets, as well as intrusions by escaped livestock into residential areas. In addition, slow-moving agriculture-related traffic is often perceived as a nuisance by residents who use the same roads.

Impact A2.	Change in the semi-rural character of Happy Valley.
	The County General Plan permits residential development throughout the Happy Valley area at densities of one to four units per acre, compared to the existing semi-rural density and the Pleasanton General Plan density of no more than one unit per two acres. The County density would thus transform Happy Valley from a semi-rural community to a more typical suburban residential area.

Cumulative Impact A1. Conversion of land from agricultural to urban use.

Similar to the proposed project and Alternatives 2 and 4.

(2) Transportation. The assumptions used to distribute traffic associated with Alternative 5 (as shown in Table 31) to area roads are summarized in Table 36. This distribution provides the basis for the level of service results included in Tables 32 and 33.

Table 36
Daily Trip Generation and Assignment: Alternative 5

	Golf Course Properties	Spotorno Upper Valley	Greater Happy Valley Area	Total
Land Use	LDR	LDR	LDR	
Size	372 du	11 du	507 du	
ADT				
Trip Rate	12.8	12.8	12.8	
Total	4,762	141	6,490	11,392
Percent of Project Traffic on Roadway Segment:				
1	50.0%	100.0%	31.1%	39.9%
2	50.0%	100.0%	31.1%	39.9%
3	0.0%	0.0%	0.0%	0.0%
4	50.0%	100.0%	25.9%	36.9%
5	50.0%	0.0%	25.9%	35.6%
6	50.0%	0.0%	25.9%	35.6%
7	50.0%	0.0%	68.9%	60.1%
8	50.0%	0.0%	68.9%	60.1%
Project Traffic Volumes on Roadway Segment:				
1	2,381	141	2,020	4,542
2	2,381	141	2,020	4,542
3	0	0	0	0
4	2,381	141	1,678	4,200
5	2,381	0	1,678	4,059
6	2,381	0	1,678	4,059
7	2,381	0	4,469	6,850
8	2,381	0	4,073	6,850

Source: TJKM Transportation Consultants

(a) Intersection Levels of Service. Under Alternative 5, levels of service would be worse than with the proposed project, but would still be acceptable. In particular, the intersection of Sunol Boulevard/Sycamore Road (#447, which would become the intersection of Sunol Boulevard with the

East/West Collector) would operate at LOS C in the AM peak hour without the West Las Positas interchange (compared to LOS B with the proposed project); the Sunol Boulevard/Junipero Street intersection (#497) would operate at LOS D in the AM peak hour with WLP (compared to LOS C with the proposed project), the intersection of I-680 NB Ramps/Sunol Boulevard (#970) would operate at LOS C in the AM peak and LOS B in the PM peak, with or without WLP (compared to LOS B and LOS A, respectively, with the proposed project), and the intersection of the I-680 SB Ramps/Sunol Boulevard (#971) would operate at LOS C in the AM peak and LOS D in the PM peak with or without WLP (compared to LOS B and LOS C, respectively, with the proposed project).

With this alternative, the Caltrans peak hour signal warrants would be met at the Pleasanton-Sunol Road/Happy Valley Road intersection due to the increased number of minor movements to and from Happy Valley Road.

(b) Roadway Segments. In this alternative, average daily traffic would exceed 3,000 vpd on all of the roadway segments studied. This impact is considered significant.

Impact B1. Traffic associated with Alternative 5 would exceed the City of Pleasanton standard (2,000 to 3,000 vehicles per day on residential roads) on all roadway segments in the study area.

Traffic on all segments except Segment 3 would exceed 3,000 vehicles per day, which is clearly greater than the range established in the City's standard.

(3) Noise. Under this alternative, noise level increases would be dramatic throughout the study area. An increase of 11 to 12 dBA would incur on Happy Valley Road, an increase of 12 to 14 dBA would occur on Alisal Street, and an increase of 8 dBA would occur along Sycamore Road from the intersection of Alisal Street to Sunol Boulevard.

Impact C1. Increase in noise levels as a result of increased traffic associated with new development.

Traffic associated with buildout of the Specific Plan would increase noise levels by more than 3 dBA along Happy Valley Road, Alisal Street, and Sycamore Road between Alisal Street to Sunol Boulevard.

There is no practical way to mitigate the traffic noise level increases along the existing street system. The need for driveway access would eliminate the possibility of building a sound wall. These traffic noise level increases would therefore be unmitigatable and a significant adverse impact.

(4) Biology. Alternative 5 would result in fewer impacts to biological and wetland resources than any other alternative considered except the No Project alternative.

The Bypass Road, which in the Specific Plan would extend the East/West Collector from the eastern edge of the North Sycamore Specific Plan area to the Spotorno Upper Valley residential areas, would not be constructed; therefore, impacts on heritage trees and on jurisdictional wetlands and waters of the U.S. in this area would be avoided. The Spotorno Upper Valley MDR area would not be developed, thereby avoiding impacts in this area.

The Golf Course properties would not be developed as a golf course: a portion (approximately the same area as the Golf Course footprint in Alternative 2, and slightly smaller than the footprint of the Golf Course plus Golf Course housing area in the proposed Project) would be occupied by Low Density Residential development, and the remainder would be designated large parcel agriculture. The development in the Spotorno Flat area would also occur over a smaller area than in Alternative 2. This smaller development footprint would reduce the potential for impacts on jurisdictional wetlands and waters of the U.S. and on heritage trees in the agricultural areas compared to the impacts under the proposed Specific Plan. The mitigation measure recommended for the proposed project would apply to this alternative as well.

(5) Other Impacts. All other impacts would be similar to those of the proposed project.

CHAPTER 5

CUMULATIVE AND GROWTH INDUCING IMPACTS

A. CUMULATIVE IMPACTS

1. Cumulative Framework

a. CEQA Requirements

The California Environmental Quality Act (CEQA) requires that EIRs contain an evaluation of a project's cumulative impacts. The State's CEQA Guidelines define 'cumulative impacts' as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." (§ 15355) Cumulative impacts occur when the environmental effects of the proposed project, in conjunction with impacts resulting from other closely-related past, present, or reasonably foreseeable future projects, increase project impacts or combine to yield new impacts. Cumulative impact analysis is based on the recognition that changes in the environment could result from the incremental impact of what could be two or more individually minor but collectively significant projects taking place over a period of time.

b. Approach

This EIR addresses the adoption and implementation of the City of Pleasanton's Happy Valley Specific Plan. Adoption of the Specific Plan will require amendment to the City's 1996 General Plan as described in Chapter 2 (Project Description). Because the General Plan has been recently updated and adopted, its policies are used as the basis for analysis of the project's cumulative effects: development consistent with the proposed Happy Valley Specific Plan evaluated in the context of the full Pleasanton General Plan comprises the future cumulative scenario considered in this section.

The context for analysis of cumulative impacts may be defined as either (1) a specific list of projects that are expected to be developed within the area that is likely to be directly affected by the project (thus, the cumulative impacts of all foreseeable projects on the project impact area) or (2) buildout of the General Plan, which would include all potential projects in the City of Pleasanton that are consistent with that Plan. Because the General Plan was recently adopted and there are no reasonably foreseeable closely-related projects, this EIR uses the second approach.

2. Assessment of Cumulative Impacts

Each of the impact areas is discussed below, under the same alphabetic heading as in Chapter 3.

a. Land Use

The project will result in conversion of grazing land to urban uses. While the Project Area's grazing lands have less value for agriculture than does prime agricultural land, their conversion to urban use contributes to the regional loss of agricultural lands in Alameda County.

Cumulative Impact A1: Land Use	Conversion of land from agricultural (grazing) to urban (residential and golf course) use.
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b. Transportation

The project's impacts on transportation facilities and cumulative travel demand is evaluated in Chapter 3, Part B. Table 10, Summary of Intersection Levels of Service, compares existing volume-to-capacity ratios with those that are projected at General Plan Buildout and with the General Plan amended to include the proposed project. Two additional scenarios (with and without the I-680/West Las Positas Interchange) are analyzed in response to the City's current deliberations regarding possible deletion of that interchange from the General Plan.

The results of these analyses, which address intersections and road segments in the Study Area, identify no significant transportation impacts at the project level. However, trips generated by development in the Study Area will contribute to the unacceptable traffic operations at other locations in the City, specifically on segments of I-580 and I-680.

Improvements to and standards for both I-580 and I-680 are included in the Tri-Valley Transportation Plan (TVTP). Because the TVTP does not provide adequate capacity to satisfy fully all future transportation demand at its established service standards, cumulative impact on the regional transportation system will occur. The development of Happy Valley consistent with the proposals of the Specific Plan will contribute to that cumulative impact.

Transportation impact fees paid by development in the Plan Area would contribute to financing improvements included in the TVTP. Other funding for TVTP-identified improvements may also be available. For example, additional funding for I-680 south, included in the STIP, will result in the addition of HOV lands and facilities for corridor ramp metering. Construction of these improvements is scheduled to begin in winter 1998 or spring 1999, earlier than they could be accomplished if wholly reliant on TVTP funds (for which the spending priority is the I-580 flyover). Commitment of TVTP is in progress: the seven participating jurisdictions have approved a Resolution of Intent, and a joint powers agreement is currently being drafted. Even when funds become available, however, fees imposed under the joint powers agreement are not expected to fully provide for meeting TVTP's service standards. Therefore, a cumulative impact would remain.

Cumulative Impact B: Transportation	Cumulative contributions of traffic to the regional system are projected to violate the standard adopted by the Tri-Valley Transportation Council.
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c. Noise

No project-level noise impacts are identified in Chapter 3 (Part C). Because noise impacts are generally site-specific and there are no adjoining land uses which are high-noise generators, the project does not contribute to cumulative noise impacts.

d. Air Quality

No air quality impacts are identified in the project analysis or the General Plan EIR. Therefore, the project has no cumulative impacts.

e. Infrastructure Systems: Water

The project would contribute to a cumulative demand for water that, in combination with other City and area plans, would require augmentation of presently identified water sources for the area. General Plan policies call for contingency planning that includes water conservation, growth management, and planning for supplemental water supply sources. If additional water supplies cannot be secured, or water conservation measures do not result in sufficient water savings, water demands of the Golf Course and additional residential development permitted by the Specific Plan will contribute to demand for water that exceeds secured supplies.

Cumulative Impact E: Water Supply	The water demand of the Specific Plan project, together with demand generated by other future development, would contribute to Zone 7's anticipated need to expand its available water resources in order to meet buildout water needs of its service area.
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f. Infrastructure Systems: Sanitary Sewer

The additional wastewater flows attributed to development under the Specific Plan could contribute to a possible future shortfall of treatment capacity at the DSRSD wastewater treatment plant as well as to an impending shortfall of export capacity at the LAVWMA facilities. General Plan policies call for securing further sewage capacity for development called for in the Plan. The impact of the project, and the City's General Plan as a whole, is mitigated by the steps the City of Pleasanton and other agencies (primarily the Dublin San Ramon Services District and the Livermore-Amador Valley Wastewater Management Authority) are taking to provide for expansion of export capacity and/or alternatives that would reduce future capacity requirements. Nevertheless, if additional treatment and export capacity are not achieved, or reductions in water use cannot reduce demand for capacity to an appropriate level, future development in Happy Valley would contribute to excess demand for the available capacity in both systems.

Cumulative Impact F1: Wastewater Treatment Capacity	Increase in wastewater flows generated by the project site, in conjunction with wastewater flows generated by other Pleasanton projects, could contribute to the Diablo San Ramon Service District's (DSRSD's) need to expand treatment capacity at the wastewater treatment plant (WWTP).
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Cumulative Impact F2: Wastewater Export Capacity	Wastewater export demand of the Specific Plan project, together with demand generated by other future development, would contribute to an impending shortfall in Pleasanton's export capacity at the facilities of the Livermore-Amador Valley Wastewater Management Authority and to LAVWMA's anticipated need to expand pipeline capacity.
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g. Infrastructure Systems: Drainage

The Specific Plan includes measures to minimize the project's impacts on water quality and storm drainage, and policies in the City's General Plan call for completion of both local and regional storm drainage improvements. The Specific Plan proposes detention facilities in the Spotorno Upper Valley, Spotorno Flat, and Golf Course areas, and minor improvements along Alisal Street and Happy Valley Road (see Chapter 3, Part G), which would reduce project stormwater runoff during the peak storm water flow period below that generated by the site in the no project condition. Therefore, there will be not adverse cumulative impact.

h. Geology, Soils, and Seismic Safety

Development in the Specific Plan area would introduce greater population within an area that is subject to seismic events. This impact would necessarily be site- and project-specific. Whether development occurs on this site will not affect the exposure of other development on other sites to seismic risk. Therefore, no cumulative impact is expected.

i. Public Health and Safety

No project-level or cumulative impacts are identified.

j. Biology

No project-level or cumulative impacts are identified.

k. Cultural Resources

No project-level or cumulative impacts are identified.

l. Visual Resources

No project-level or cumulative impacts are identified.

m. Public Services

No project-level or cumulative impacts on parks and recreation or police services are identified.

In combination with other planned, proposed, and approved development, including buildout of development anticipated by the Pleasanton General Plan, development according to the Happy Valley Specific Plan would contribute to demands for fire protection that would eventually expose additional portions of the fire service area to risk in the form of response times exceeding five minutes.

**Cumulative Impact O:
Fire Protection**

In combination with other planned, proposed, and approved development, including buildout of development anticipated by the Pleasanton General Plan, development according to the Happy Valley Specific Plan would contribute to demands for fire protection that would eventually expose additional portions of the fire service area to risk in the form of response times exceeding five minutes

B. GROWTH-INDUCING IMPACTS

1. Growth Inducement Framework

a. CEQA Requirements

The State CEQA Guidelines (§15126(g)) indicate that EIRs should address whether a proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. A project may be considered growth-inducing if it removes obstacles to growth or encourages other activities that cause significant environmental effects. Analysis of growth-inducing impacts must evaluate both individual and cumulative environmental effects.

b. Approach

Though the project includes amendments to the General Plan, it is generally consistent with the Plan's policies relating to construction of housing and to establishment of the Urban Growth Boundary and securing of land in long term open space use. The General Plan discusses South Pleasanton, including Happy Valley, as an "Area of Special Interest." Happy Valley is envisioned as a large-lot residential area (with generally a two-acre density) in an open space setting, with the municipal Golf Course south-east of Happy Valley Road. Thus, development of Happy Valley has been anticipated by the City's other planning efforts.

The assessment of growth-inducing impacts below considers separately direct and indirect impacts, assuming full implementation of both the Specific Plan and all related General Plan policies.

2. Assessment of Direct Growth Inducing Impacts

The Happy Valley Golf Course and housing in the Spotorno Upper Valley and Spotorno Flat areas are expected to be developed within five years after adoption of the Specific Plan. Infill residential development on the remaining lots in the Happy Valley Specific Plan area is expected to be complete within 15 years after Plan adoption.

The direct impacts of the project would allow housing and Golf Course construction consistent with the Specific Plan as discussed in Chapter 2 (Project Description). In addition to the 136 housing units in areas now in open space use, up to 43 infill units in the Greater Happy Valley Subarea could be constructed. Provision of infrastructure for water supply and sanitary sewer facilities would remove the factors that have caused the imposition of a moratorium on further construction in the Greater Happy Valley Subarea. Presumably, the moratorium would be lifted following construction of the public facilities described in the Specific Plan, allowing construction of infill units to take place. Although growth within the Specific Plan Area would be accommodated by Plan infrastructure, that growth has long been envisioned by both City and County General Plans, and no capacity in the infrastructure systems would be provided for growth outside the UGB. Therefore, the Specific Plan would not have adverse growth inducing impacts.

3. Assessment of Indirect Growth Inducing Impacts

Indirect growth inducing impacts would result if a project causes or promotes development outside of the Specific Plan Area boundaries. Areas outside of the Project Area are either planned for urbanization

under the City's General Plan or are outside of the Urban Growth Boundary (UGB) incorporated into the City's General Plan as part of the 1996 General Plan update. The UGB is reinforced by the policies of Alameda County as expressed in the County's *East County Area Plan*. One function of the UGB is to limit indirect growth impacts on areas not planned for urbanization. Implementation of the Specific Plan will reinforce the UGB by securing open space through public purchase and deed restrictions consistent with the City's General Plan. The transition between urban and open space uses is further reinforced by topographic features which define areas designated for development by the City.

The provision of urban infrastructure is frequently held to be growth inducing if it would permit service extensions to unserved and unplanned areas. This is not the case in the Happy Valley Project Area, where the infrastructure improvements proposed have been designed expressly to serve the level of development planned. The circulation system as well as other infrastructure systems have been designed to serve only the project area, without potential for expansion. The water and sanitary sewer systems do not have extra capacity and therefore could not be extended to serve development not envisioned in the Specific Plan. Areas designated by the City for residential development to the north will not have road connections to Happy Valley (with the exception of the North Sycamore Specific Plan area), so construction of Project Area roads will not induce infrastructure provision to other areas.

Based on these observations, it is concluded that the project would not result in adverse growth inducing impacts, and would in fact contribute to implementing the City's Urban Growth Boundary.

CHAPTER 6

OTHER ENVIRONMENTAL CONSIDERATIONS

A. SIGNIFICANT ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED IF THE PROJECT IS IMPLEMENTED

1. Project-Level Impacts

The Happy Valley Specific Plan was prepared in conjunction with this environmental review, so that potentially significant adverse impacts identified by the EIR process could be mitigated by the provisions of the Plan itself. As a result, few significant impacts are identified in this EIR, and those that are identified cannot be mitigated to less-than-significant levels. These unavoidable adverse impacts are:

- **Land Use.** Conversion of land from agricultural (grazing) to urban (golf course and residential) use.
- **Seismic Safety.** Risk to property and human life. Even with complete compliance with seismic safety policies and requirements, seismic risk to property and human life remains that cannot be fully mitigated.

2. Cumulative Impacts

In addition to the project-level impacts named above, the EIR (Chapter 5) identifies the following cumulative impacts that could not be avoided if all development permitted by the Happy Valley Specific Plan occurs:

- **Land Use.** Conversion of agricultural lands on the site to urban use, together with other such conversions in Alameda County, would be an unavoidable cumulative adverse impact.
- **Transportation.** Cumulative contributions of traffic to the regional system, projected to exceed the standard adopted by the Tri-Valley Transportation Council.
- **Water Supply.** The water demand of the Specific Plan project, together with demand generated by other future development, would contribute to Zone 7's anticipated need to expand its available water resources in order to meet buildout water needs of its service area.
- **Wastewater Treatment Capacity.** Increase in wastewater flows generated by the project site, in conjunction with wastewater flows generated by other Pleasanton projects, would contribute to the Diablo San Ramon Service District's (DSRSD's) need to expand treatment capacity at the wastewater treatment plant (WWTP).

- **Wastewater Export Capacity.** The wastewater export demand of the Specific Plan project, together with demand generated by other future development, could contribute to a possible future shortfall of Pleasanton's export capacity in the Livermore-Amador Valley Wastewater Management Authority (LAVWMA) pipeline and to LAVWMA's anticipated need to expand pipeline capacity.

B. SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES THAT WOULD BE INVOLVED IN THE PROPOSED PROJECT SHOULD IT BE IMPLEMENTED

Development of the site as permitted by the Specific Plan would involve the consumption of non-renewable energy resources (natural gas, electricity, gasoline, other fuels) and the commitment of materials (such as wood, concrete, metal and plastic) during the construction and operation of the project.

Other impacts, such as the development of urban uses (including housing and a golf course) on a site that has been in agricultural use, would be irreversible in a practical sense; that is, they would be technically capable of being reversed, but the cost of doing so would make the likelihood of such a change very low. (For example, removal of all development, including streets, and return of the land to a condition in which it could be used for agriculture is not considered likely.)

None of these changes constitutes a significant adverse impact as defined by CEQA.

C. ENVIRONMENTAL EFFECTS FOUND NOT TO BE SIGNIFICANT

This EIR evaluates all of the environmental topics of potential concern identified in the City of Pleasanton Initial Study Environmental Checklist Form. The EIR evaluation concludes that there would be no significant project impacts in the following areas:

- Land Use (no significant project-level impact; cumulative impact on agricultural land)
- Transportation
- Noise
- Air Quality
- Infrastructure Systems: Water (no significant project-level impact on water supply or storage and distribution systems; cumulative impact on water supply)
- Infrastructure Systems: Wastewater (no significant project-level impact on collection system capacity, treatment capacity, or export capacity; cumulative impact on treatment capacity and export capacity).
- Infrastructure Systems: Drainage
- Public Health and Safety

- Cultural Resources
- Visual Resources
- Public Services: Parks and Recreation, Police, and Fire Protection (cumulative impact on fire protection)

D. THE RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF THE ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

The use of the study area in the past has focused on agricultural production. The Specific Plan would permit this area to be partially converted to urban development, including housing and a golf course. This conversion is anticipated in the Pleasanton General Plan, which guides the long-term use of land in the City of Pleasanton.

As noted on the preceding page, the replacement of agricultural uses by urban development is effectively irreversible.

Placement of the planned golf course and open space between the residential area(s) and the Urban Growth Boundary line would create a firm boundary to urban development that constitutes a barrier to future encroachment by urban uses onto remaining agricultural lands.

CHAPTER 7

CONSISTENCY WITH LOCAL PLANNING

This chapter identifies policies and programs of the Pleasanton General Plan that are relevant to the proposed Happy Valley Specific Plan, and provides information about the consistency of the Specific Plan with the General Plan. The material in this chapter is presented in the same sequence as in Chapter 3.

A. LAND USE

The consistency of the Specific Plan with the land use designations of the General Plan and with the Urban Growth Boundary is discussed in Chapter 3, Part A.

The Land Use Element also contains policies and programs that are intended to guide the development of land uses in the Planning Area covered by the General Plan. Policies and programs that are applicable to this project, and the project's relationship to them, are discussed below:

Policy 10: Preserve open space areas for the protection of public health and safety, the provision of recreational opportunities, use for agriculture and grazing, the production of natural resources, the preservation of wildlands, and the physical separation of Pleasanton from neighboring communities.

The Specific Plan provides for open space on the south, southeast, and east edges of the Specific Plan area, with those spaces to be used for continued limited agriculture and/or recreation.

Policy 11: Maintain a permanent Urban Growth Boundary (UGB) beyond which urban development shall not be permitted.

Program 11.1: Permit only non-urban uses beyond the UGB.

Program 11.2: Extend urban services only to areas within the UGB . . .

A small portion of the Golf Course extends beyond the UGB. However, recreation is defined by the General Plan as an "Open Space" use; therefore, the Plan is consistent with this policy.

The extension of the City's water and sewage systems into the Specific Plan area would serve only locations within the UGB. Those systems would not have excess capacity that could later serve areas beyond the UGB.

B. TRANSPORTATION

The Circulation Element of the General Plan outlines the routes and hierarchy of roads that are expected to be needed to serve Pleasanton when all development allowed by the Plan has been completed, and calls for planning this circulation system as development proceeds. Key policies and programs of the Circulation Element are:

Policy 1: Complete the City's street and highway system in accordance with the General Plan Map.

Program 1.1: Require new developments to pay for their fair share of planned roadway improvement costs.

The General Plan Map shows a road along the alignment of the proposed Bypass Road from the border of the North Sycamore Specific Plan Area to the proposed Spotorno Medium Density Residential area. The proposed project would generally conform to Policy 1 and Program 1.1 because all new development is committed to pay transportation impact fees that are levied by the Tri-Valley Council (when those fees are adopted) to cover its fair share of offsite improvements for which those fees are intended.

Policy 2: Phase development and roadway improvements so that Levels of Service do not exceed LOS D at major intersections outside the Central Business District.

Intersections studied in this EIR would all operate at Level of Service D or better with project buildout.

Policy 5: Adhere to City design standards for streets in new developments.

Program 5.2: Provide more than one access road to new developments, and discourage cut-through traffic by appropriate use of traffic controls.

Happy Valley has access via Sycamore Road and Happy Valley Road. The proposed project provides only a single access road (the "Bypass Road") to the Golf Course and surrounding housing, but provides an alternate route for emergency vehicles into this area via an extension of Happy Valley Road east of Alisal Street.

Cut-through traffic would not be an issue in the Happy Valley area, even with more than one access road, because all access routes would be loops off of Sunol Boulevard.

Program 5.5: Design new streets and alterations of existing streets to preserve the character and safety of existing residential streets.

The Bypass Road, which is the only new road proposed for the project area (other than the emergency vehicle access roads), will be separate from all other roads in the area: it is an extension of the East/West Collector through the North Sycamore Specific Plan area, and does not connect to any of the roads in the Happy Valley area. It is to be designed so as to minimize its visual impact as seen from Happy Valley.

The semi-rural character of Happy Valley requires streets that are not improved to full urban standards, and existing streets do not include sidewalks or trails. The construction standards for the Bypass Road include a trail on one side. This trail provision brings the new road into conformity with these General Plan policies.

Policy 15: Create and maintain a safe, convenient, and effective bicycle system which encourages increased bicycle use.

Policy 16: Create and maintain a safe and convenient pedestrian system which encourages walking as an alternative to driving.

The Specific Plan also includes a number of trails that would provide recreational opportunities throughout the Happy Valley Area (e.g., the Happy Valley Loop and Golf Course Loop trails) and that provide

pedestrian connections through the area (see Figure 28, p. 151). This trail system brings the Plan into conformity with General Plan policies 15 and 16.

C. NOISE

The Noise Element of the Pleasanton General Plan includes the following goals, policies and programs related to noise and applicable to the project:

- Policy 1: Require new projects to meet acceptable exterior noise level standards.
 - Program 1.1: Use the “normally acceptable” noise levels for new uses as established in the “Noise and Land Use Compatibility Guidelines” contained in Table VIII-3 (of the General Plan; reproduced in this EIR as Table 11).
 - Program 1.2: Use noise guidelines and contours to determine the need for noise studies and require new developments to construct or pay for noise attenuation features as a condition of approving new projects.
 - Program 1.3: Require noise studies for future projects to use a consistent format, to analyze alternative mitigations and to evaluate the effectiveness of the mitigations following their implementation.
- Policy 3: Ensure that noise does not exceed interior noise levels of 45 L_{dn} for residential uses and those levels specified in noise studies for other uses.
 - Program 3.1: Require new developments to pay their fair share of mitigation measures necessary to reduce interior noise levels within adjacent or impacted land uses.

“Normally acceptable,” “conditionally acceptable,” and “unacceptable” noise conditions are defined in Table 11 (Chapter 3, Part C).

The Specific Plan is consistent with all the Noise Element programs and policies because noise would not exceed the normally acceptable levels defined in the guidelines in any location.

D. AIR QUALITY

The proposed project is not expected to contribute to air pollution at a significant level. At the same time, site terrain and the mix of land uses dictates a project design that is not pedestrian-oriented (Program 4.3) in conventional terms (that is, encouraging walking as an alternative mode of transportation for home-work and home-shopping trips); does not encourage modes of transportation other than the single-occupant vehicle (Program 4.5); and does not provide services and facilities that would reduce the need to travel by single-occupant vehicle (Program 4.6).

Although the proposed project does not support these General Plan programs, it is not considered inconsistent with the General Plan because Happy Valley is an area in which the existing land use pattern, permitted density, and the semi-rural character of development do not reasonably allow implementation of the identified programs. The Specific Plan does provide for pedestrian trails along the roads in an effort to facilitate walking as much as possible in a semi-rural neighborhood.

E. WATER

Relevant policies concerning water facilities are contained in the Public Facilities Element of the General Plan:

- Policy 4: Ensure an adequate water system for existing and future development; and maintain an adequate reserve of water in storage facilities.
 - Program 4.1: Require new development to pay for its fair share of the City's water system master plan improvements.
 - Program 4.4: Maintain water pressure at sufficient levels to serve residential, commercial, industrial, and fire flow requirements as determined by the City Engineer.
 - Program 4.5: Require the installation of water conservation devices and drought tolerant landscaping in appropriate locations.
 - Program 4.6: Utilize water reclamation measures to the fullest extent feasible.

The Specific Plan provides for the extension of the City water system into the Happy Valley area, to be funded by the Golf Course and by housing units that connect to the system. This provision is consistent with General Plan Policy 4 and Program 4.1. The system is designed to meet the requirements of Program 4.4.

The Specific Plan also requires the installation of water conservation devices and drought-tolerant landscaping, and utilization of water reclamation measures to the fullest extent possible. These requirements are consistent with Programs 4.5 and 4.6.

F. SANITARY SEWER

The Public Facilities Element also contains an additional applicable program regarding sanitary sewers:

- Program 2.1: Require new development to pay its fair share of the City's planned sewer system improvements including treatment, distribution, reuse, and export facilities.

The Specific Plan provides for extension of the City's sewer system to the Happy Valley area, with construction to be funded by the Golf Course and housing units that connect to the system. This provision is consistent with the General Plan.

G. DRAINAGE

Policies and programs regarding drainage, stormwater runoff quality, and flooding contained in the Public Facilities Element of the General Plan are listed below. The relevance of each policy and program to the proposed project is also described.

1. Storm Drainage

Policy 5: Ensure an adequate storm drainage system to serve existing and future development.

Program 5.2: Design local storm drainage improvements to carry appropriate design year flows resulting from buildout of the General Plan.

Program 5.4: Require new development to improve local storm drainage systems to accept appropriate design year flows resulting from new development, as determined by the City Engineer.

The project proposes low density residential development that would not be serviced by a conventional storm sewer system. Stormwater runoff during peak flood periods would be directed toward detention basin features on the Golf Course as well as at the Spotorno Upper Valley Medium Density Residential area and Spotorno Flat area. The project would thereby contribute less runoff to existing conveyance structures during peak storm water flood periods than the area contributes in the current condition. The final grading and drainage plan would be reviewed, prior to project approval, by the City Engineer (as required by the Specific Plan).

Program 5.1: Require new development to pay its fair share of the storm drainage improvement costs.

The City of Pleasanton would pay for the detention basins on the Golf Course and the developer(s) of the Spotorno property would pay for the detention basins that will intercept storm water runoff from the Spotorno Upper Valley Medium Density Residential area and the Spotorno Flat area. Other small developments would also pay for their storm drainage improvements.

Program 6.1: Require new development to pay its fair share of the flood control improvement costs included in Zone 7's Master Plan.

The Financing and Implementation Plan section of the Specific Plan assigns responsibility for financing of drainage improvements as well as other infrastructure costs.

Program 6.2: Ensure that detention basins are designed to allow for public amenities, recreation, natural habitat, and agriculture, where feasible.

Detention basins that are included on the Golf Course to contain storm water runoff are integrated into the design of the Course, and thus are compatible with recreation uses. They are also intended to enhance the appearance of the Course. The Spotorno detention basins will also be required to conform with this program.

2. Clean Water Program

Policy 17: Implement stormwater runoff requirements, as recommended by the Alameda County-wide Clean Water Program, with as little impact on development and business costs as possible.

Program 17.1: Incorporate conditions of approval developed by the Alameda County-wide Clean Water Program, as appropriate, for new development and discretionary permits.

The Specific Plan requires compliance with stormwater runoff requirements, including requirements of the Alameda County-wide Clean Water Program.

Program 17.4: Encourage the use of site planning and design techniques to minimize impacts to water quality, including minimizing land disturbance, minimizing impervious surfaces, clustering development, preserving open space, and maintaining riparian areas with buffer zones to reduce runoff into waterways.

The Specific Plan (Section VIII.D) requires that (1) all new development projects comply with the storm water runoff requirements of the Alameda Countywide Clean Water Program and (2) implement site planning and design techniques to minimize impacts on water quality. This section of the Plan specifically requires preparation of a Golf Course Design and Management Plan, an Integrated Pest Management Plan, and a Water Quality Management Plan.

Program 17.6: Require the use of Best Management Practices for construction activities and ongoing business operations to prevent contaminants from entering the storm drain system.

Program 17.8: Conduct construction site field inspections to ensure the proper implementation and maintenance of erosion prevention and materials/waste management to effectively prohibit non-stormwater discharges.

By meeting the requirements of the Alameda Countywide Clean Water Program and preparation of the three plans referenced above, the project will achieve consistency with these General Plan programs.

The Conservation and Open Space Element of the General Plan contains the following relevant policy:

Policy 9: Protect the quality and quantity of surface water and groundwater in the Planning Area.

Extension of the City sewer system to the Specific Plan area will allow existing residences to connect to the system and discontinue use of private septic systems, which have contributed to water quality problems in the past (resulting in the existing moratorium on development).

The Specific Plan requires preparation and approval of a Golf Course Design and Management Plan, an Integrated Pest Management Plan, and a Water Quality Monitoring Plan for the Golf Course. These plans are intended to protect water quality from pollutants that could be contained in runoff from the Golf Course.

3. Flood Hazards and Flood Control

The project site is not located within the mapped 100-year flood hazard area or dam failure inundation area, as discussed in Chapter 3.

The project will not increase peak flood flows offsite, because it includes installation of detention basins in the Golf Course area and the Spotorno Upper Valley and Spotorno Flat residential areas to mitigate existing localized flooding problems along Happy Valley Creek and Sycamore Creek.

Evaluation of the Spotorno Dam prior to construction or in conjunction with construction of the Bypass Road, as required by the Specific Plan, will mitigate potential hazards associated with possible failure of that dam.

H. GEOLOGY AND SOILS

The Public Safety Element of the Pleasanton General Plan strives “To minimize the risks to lives and property, and to minimize the potential liability to the City, due to seismic activity within the Planning Area” (Goal 1). Policies and programs regarding geology, soils, and seismicity that are relevant to the proposed project are described below:

Policy 1: Restrict development in areas prone to seismic safety hazards.

Program 1.1: Comply with the Alquist-Priolo Act and other seismic safety criteria established by the City of Pleasanton.

Program 1.2: Prohibit construction of habitable structures within at least 50 feet of an identified active fault trace as shown on site-specific geologic studies.

Program 1.3: Prohibit construction of facilities and systems vital to the public health and safety (e.g., water facilities, fire stations, hospitals, communication facilities, etc.) within the Alquist-Priolo Earthquake Fault Zones.

Portions of the proposed project site are within the Alquist-Priolo Earthquake Fault Zone for the Verona Fault. Construction of any structures for human occupancy within the zone will require investigation of the potential for fault rupture. Previous investigation of the Verona Fault within the project site did not identify evidence of recent faulting; nevertheless, site-specific studies would be required for any projects within the zone.

Policy 2: Investigate the potential for seismic hazards during the development review process, and implement soil engineering and construction standards which minimize potential danger from earthquakes.

Program 2.1: Require site-specific soils, geologic, and/or geotechnical engineering studies prior to development approval of structures for human occupancy for any project proposed within areas shown on current Alquist-Priolo Earthquake Fault Zones Maps. Also, require such studies for any project proposed within areas identified with “Moderately High” to “Extreme” seismic shaking amplification (Table V-3 and Figure V-4 of the General Plan).

The project site includes areas within the Alquist-Priolo Earthquake Fault Zone for the Verona Fault and areas (mostly in the alluvial deposits in Happy Valley) identified in the General Plan as having moderate to high seismic shaking potential. These areas include portions of the site proposed for residential development. Therefore, the requirements for geotechnical reports in the General Plan would apply to many individual proposed developments within the project site.

- Program 2.4: Design new bridges and retrofit existing bridges with appropriate engineering and design mitigations in accordance with CALTRANS standards.

The project proposes the construction of a new bridge for the Bypass Road over Sycamore Creek in the northeastern portion of the site. Construction of the bridge is, therefore, required to meet the above standards.

- Program 2.5: Require technical review and analysis of soils, geologic, and geotechnical studies by a qualified consulting engineering geologist reporting to the City of Pleasanton. Incorporate the recommendations of the City's consulting engineer into the project design.

- Program 2.6: Require professional inspection of foundations, piers, excavation, earthwork, and other aspects of site development during construction. Ensure that all mitigations recommended by the City's consulting engineer are incorporated into the project construction.

Programs 2.5 and 2.6 would apply to all projects within the City's jurisdiction and would be required of projects within the Plan Area, as specified in the Specific Plan.

- Policy 5: Investigate the potential for geologic hazards as part of the development review process, and maintain this information for the public record.

The Specific Plan requires soils studies prior to approval of individual development projects, slope stability analyses for development in areas with slopes greater than 20 percent, and grading plans and slope designs for all projects that require grading. The Plan also requires that all purchasers of new residential units in the area be notified of potential for seismic-related risks.

- Policy 6: Restrict new development of sites with structures intended for human occupancy in any landslide prone area and indicated as "Moderate" through "High" hazard for any geologic zone.

- Program 6.1: Prohibit new development of sites with structures intended for human occupancy in any landslide-prone areas which are also indicated as "High" hazards and designated on the General Plan Map as Public Health and Safety.

The Specific Plan requires preparation of a slope stability analysis (static and pseudo-static conditions) by a licensed Geotechnical Engineer, and inclusion of that analysis in the geotechnical report for any proposed residential development in areas within or adjacent to existing landslides. Such analyses would assure that development does not occur on sites that are unsafe for human occupancy.

I. PUBLIC HEALTH AND SAFETY

The Public Safety Element of the City of Pleasanton General Plan contains programs and policies regarding hazardous materials management. The following policies and programs are applicable to the Specific Plan area.

- Policy 16: Regulate the transportation, delivery, use, and storage of hazardous materials within the city limits.
- Program 16.1: Enforce the provisions of the City's Hazardous Materials Storage Permit Ordinance
 - Program 16.2: Require scheduled on-site monitoring of all sewer outfalls for sites permitted to store hazardous materials.
- Policy 17: Ensure that hazardous materials and potential contamination are remediated prior to development.
- Program 17.1: Require a site-specific soils report for new development where there is a history of prior industrial or agricultural land use activities.

These policies and programs partially require that the City enforce existing ordinances, but also have requirements for developers in the City. The Specific Plan includes provisions for ensuring that the General Plan programs be adhered to for development in the Specific Plan area. The Specific Plan also mandates planning and pre-construction activities to alleviate public health and safety concerns.

J. BIOLOGY

The General Plan Land Use Map designates much of the eastern and southern hills in the Specific Plan area as Wildlands Overlay areas. The text of the Plan (beginning p. VII-5) states that Wildlands Overlay areas contain valuable habitats and communities, and require special attention in order to protect biological diversity and special-status species listed by Federal and State agencies. The Plan goes on to describe additional functions of Wildlands Overlay areas: corridors for the movement of wildlife between major open space areas, and enhancement of the human environment through the provision of scenic resources and educational opportunities.

The Plan notes that the grasslands and woodlands in the City's Southeast Hills are designated as Wildlands Overlay because that area "incorporates biological diversity and forms a bridge between the Pleasanton Ridge Regional Park and wildlands in the San Antonio Reservoir area."

General Plan policies and programs that address Wildlands Overlay areas and other issues relevant to biological resources are in the Conservation and Open Space Element. Following the statements of policies and programs below, the relevance of each to the proposed project is described:

- Policy 1: Preserve and enhance natural wildlife habitats and habitat corridors.
- Program 1.3: Preserve and enhance the resource value of wetlands through project development design measures. These measures should be based in part on jurisdictional wetlands delineation in accordance with current Army Corps of Engineers criteria, for projects that are known to have or that may have wetlands present within their boundaries.

The Specific Plan requires consultation with the U.S. Army Corps of Engineers prior to any activity that would occur within the jurisdictional limits of wetlands or within a bed or bank of waters of the U.S.

Policy 2: Preserve heritage trees throughout the Planning Area.

Program 2.1: Follow the provisions of the City's Heritage Tree Ordinance when reviewing future development projects.

The Specific Plan requires preparation and approval of a Master Landscape Plan and Tree Preservation Plan prior to approval of a grading plan for individual projects. The required elements of these plans are detailed in the discussion of heritage trees, in Chapter 3, Part J. These plans would assure that development in the Specific Plan area conforms to the provisions of the City's Heritage Tree Ordinance.

Policy 3: Preserve and enhance stream beds and channels in a natural state, except where needed for flood and erosion control.

Program 3.3: Utilize habitat preservation and reclamation measures when designing flood and erosion control projects to limit impacts on plants and wildlife.

The Specific Plan requires that all development be set back at least 100 feet from the existing centerline of Sycamore Creek or at least 10 feet from the outermost drip line of the existing riparian corridor, whichever is greater, and that appropriate permits and/or agreements be obtained from state and federal regulatory agencies prior to encroachment into the buffer zone of Sycamore Creek. Where golf course grading or other development would affect Happy Valley Creek or other drainage channels, the Plan requires that the California Department of Fish and Game be consulted prior to any encroachment into areas subject to their jurisdiction; that appropriate permits and/or agreements be obtained from state and federal regulatory agencies prior to realignment of the creek; and that a Riparian Restoration Plan, a Master Landscape Plan, and a Tree Preservation Plan be prepared and approved prior to approval of a grading plan.

K. CULTURAL RESOURCES

The Conservation and Open Space Element of the General Plan contains policies and programs concerning the preservation of cultural resources:

Policy 6: Preserve and rehabilitate those cultural and historic structures which are significant to Pleasanton because of their age, appearance, or history.

Program 6.2: Require archaeological studies in areas of known archaeological significance prior to development approval, and ensure that such studies meet the requirements of CEQA Appendix K in recommending mitigation measures if an archaeological site is encountered. Include provisions for the interpretation of cultural resources.

Program 6.3: Follow the recommendations contained within archaeological studies regarding rehabilitation or preservation of archaeologically significant structures and sites.

The Specific Plan requires that historic structures be avoided or documented, that construction be monitored, and that any discoveries made during construction be evaluated by a qualified archaeologist.

L. VISUAL RESOURCES

The Community Character Element of the General Plan contains the following policies and program for the visual character of the study area:

Policy 16: Require the design of new residential development in hillside areas to complement the natural appearance of open space.

Policy 18: Preserve the semi-rural character of the Happy Valley area.

Program 18.1: Adopt design standards for public and private development in the Happy Valley area.

The Specific Plan's site development standards and design guidelines will help insure that the size, siting, lot layout, architectural design of residences and accessory buildings, landscape planting, and fencing reflect and reinforce the existing semi-rural development pattern.

The semi-rural quality of Greater Happy Valley is recognized in the Specific Plan in that it (1) allows, on lots of at least 40,000 square feet, the keeping of farm animals and (2) provides, where feasible, for the retention and preservation of old water towers, windmills, barns, and interesting agricultural structures.

The Conservation and Open Space Element of the General Plan includes the following policy and program:

Policy 5: Preserve as permanent open space all areas of outstanding scenic qualities or areas which provide extraordinary views of natural and man-made objects.

Program 5.3: Encourage developers to dedicate scenic/conservation easements for private open space areas possessing exceptional natural, scenic, and/or vegetation or wildlife habitat qualities.

Some land (131 acres in the Golf Course subarea) will be acquired by the City of Pleasanton. The remainder of the area designated for Open Space will be dedicated to the City as public open space or encumbered with open space easements upon subdivision of the non-Open Space portions of those lands (see Specific Plan Section V.B.6.c.7).

M. PUBLIC SERVICES: PARKS AND RECREATION

The Public Facilities Element of the General Plan contains the following policy and programs:

Policy 14: Promote the development of public golf courses within the Planning Area.

Program 14.1: Encourage the development of at least one municipal, affordable, walkable golf course, and at least one championship golf course open to the public.

Program 14.2: Encourage golf course designs which conserve water resources.

The Specific Plan implements this policy and both programs by providing an affordable, walkable municipal golf course that is designed to conserve water resources.

The Conservation and Open Space Element of the General Plan includes the following programs:

Program 4.4: Preserve large blocks of open space land by encouraging the clustering of development.

The Specific Plan preserves the southern and eastern hills of the area as open space, adjacent to the agricultural areas that will remain beyond the City's Urban Growth Boundary. Residential development in the Spotorno Upper Valley areas is clustered in two locations to maximize the size of remaining contiguous open space areas, and homes proposed for the Golf Course Housing area are to be clustered to maximize the area for open space provided by the golf course.

Program 4.6: Encourage developers to publicly dedicate fee title to open space lands: (1) that are determined to have considerable public recreational, scenic, or natural resource value; (2) where operational costs can be met; and (3) where significant potential health or safety hazards do not exist. Public access should be offered to the fullest extent possible.

Program 4.8: Encourage public accessibility to appropriate open space land.

Policy 12: Promote the development of bicycle, equestrian, and hiking trails throughout the Planning Area.

Program 12.1: Develop a system of bicycle, equestrian, and hiking trails in accordance with Figure III-9 of the Circulation Element.

Program 12.5: Encourage developers to dedicate public access easements in private open space areas to facilitate the system of trails in Pleasanton shown on Figure III-9 of the Circulation Element.

Portions of the open space lands in the Specific Plan area are to be acquired by the City and preserved as public open space. When subdivision of lots designated as Open Space occurs, open space easements on these areas will be required to be dedicated to the City or a land trust, or the land must be dedicated in fee simple to the City for public open space (Section V.B.6.c.7 of the Specific Plan). The Plan includes a trail system (described in Chapter 3, Part M) that provides access to these areas. Where land designated for Open Space is to remain in private ownership, the owner will be required to grant agricultural or scenic easements to insure that these areas will not be developed.

N. PUBLIC SERVICES: POLICE SERVICES

General Plan policies and programs concerning police services are contained in the Public Safety Element. They address the desire to maintain and enhance the level of police personnel and equipment to protect the community. None of the programs is directly relevant to the proposed project.

O. PUBLIC SERVICES: FIRE PROTECTION

The Public Safety Element of the General Plan contains the following policy and programs:

- Policy 9: Annex all fire pockets (territory enclosed by Pleasanton Fire Department Service Areas but not itself serviced) within the Pleasanton Planning Area.

The Specific Plan area would be annexed to the City of Pleasanton.

- Program 11.1: Require developers to finance and construct necessary water facilities for their projects when they develop.

The Financing and Implementation Plan portion of the Specific Plan assigns responsibility for financing of the water system (including pipelines, pump stations, water tanks, and booster pumps) and fire hydrants.

- Program 11.2: Require that all new developments be provided with sufficient fire flow facilities at the time of development at least at the level specified by the Fire Chief.

- Policy 13: Require fire mitigation measures in new developments proposed, and require additional mitigation for those developments outside of the five-minute response time zones as determined by the Fire Chief.

- Program 13.3: Ensure that all buildings be accessible to fire vehicles and fire fighting equipment.

- Program 13.5: Require a greater degree of fire resistivity in roof covering for buildings within hazardous areas.

- Program 13.8: Require fire breaks, green areas/"wetblankets," and/or greater building setbacks adjacent to unmaintained open space areas.

The Specific Plan includes provisions for adequate fire flow facilities/capacity and sprinklering of buildings, restrictions on roof materials in certain areas, and requirements for wildland/urban interface management plans that reduce potential fire risks at the edge of development. It also includes an emergency vehicle access road to assure multiple routes for firefighting equipment to all areas covered by the Specific Plan.

P. OTHER POLICIES AND PROGRAMS CONCERNING INFRASTRUCTURE AND UTILITIES

In addition to the goals, policies, and programs discussed above, the Specific Plan also identifies the following policy from the Public Facilities Element of the General Plan as relevant to the proposed project:

- Policy 12: Require annexation to the City as a pre-requisite to utility extension.

The proposed project includes annexation of the Happy Valley area to the City of Pleasanton prior to extension of City water and sewer to the area.

CHAPTER 8

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APPENDICES

- A. Notice of Preparation of a
Draft Environmental Impact Report**
- B. Fundamentals of Acoustics**
- C. Golf Course Grading**
- D. Cultural Resources**

Appendix A

CITY OF PLEASANTON

P.O. BOX 520 PLEASANTON, CALIFORNIA 94566-0802

CITY OFFICES
123 MAIN STREET

CITY COUNCIL
4-8001

CITY MANAGER
484-8008

ATTORNEY
4-8003

CITY CLERK
484-8235

NCE
4-8033

PERSONNEL
4-8012

CITY OFFICES
200 OLD BERNAL AVE.

PLANNING
484-8023

ENGINEERING
4-8041

BUILDING INSPECTION
484-8015

COMMUNITY SERVICES
4-8160

WATER - BILLING
484-8038

LAND SERVICES
3333 BUSCH RD.

PORT SERVICES
4-8067

PARKS
484-8056

TARY SEWER
4-8061

STREET
4-8066

ER
484-8071

E
44 RAILROAD AVE.
484-8114

LICE
4833 BERNAL AVE.
P.O. BOX 909
4-8127

Subject: Notice of Preparation of a Draft Environmental Impact Report

Lead Agency: City of Pleasanton Planning Department
Street Address: 200 Old Bernal Avenue, P. O. Box 520
Pleasanton, California 94566-0802
Contact: Wayne Rasmussen, Principal Planner

The City of Pleasanton Planning Department will be the Lead Agency and will prepare a draft Environmental Impact Report (EIR) for the project identified below. We need to know the views of your agency as to the scope and content of the environmental information which is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency may need to use the EIR prepared by our agency when considering your permit or other approval for the project.

The project description, location, and the potential environmental effects are contained in the attached Initial Study.

Due to the time limits mandated by State law, your response must be sent at the earliest possible date but *not later than 30 days* after receipt of this notice.

Please send your response to Wayne Rasmussen, Principal Planner, at the address shown above. We will need the name for a contact person in your agency.

Project Title: GPA-97-01, SP-97-01, RZ-97-01, General Plan Amendment, Specific Plan, Pre-Zoning, and Annexation of the 850-Acre Happy Valley Area.

Project Location: Sycamore Road/Alisal Street/Happy Valley Road area, Pleasanton, Alameda County (please refer to the attached location map).

Project Description:

General Plan Amendment to permit: (1) a reconfiguration of land use designations (Low Density Residential, Parks and Recreation, and Public Health and Safety/Wildlands Overlay); (2) a minor adjustment to the Urban Growth Boundary Line location; (3) extension of a future collector street; and (4) minor modifications to the General Plan text regarding the description of the Happy Valley area.

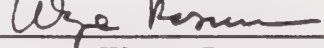
Specific Plan to permit an 18- to 27-hole municipal golf course, limited additional single-family housing, open space, new access road to the Happy Valley area, and an extension of City sewer and water service.

Pre-zoning to the following Planned Unit Development (PUD) designations: PUD Golf Course, PUD Low Density Residential, PUD Medium Density Residential, and PUD Open Space.

Annexation of the Happy Valley area to the City of Pleasanton following pre-zoning.

Please refer to the attached project concept plan.

Date March 5, 1997

Signature 
Wayne Rasmussen

Title Principal Planner

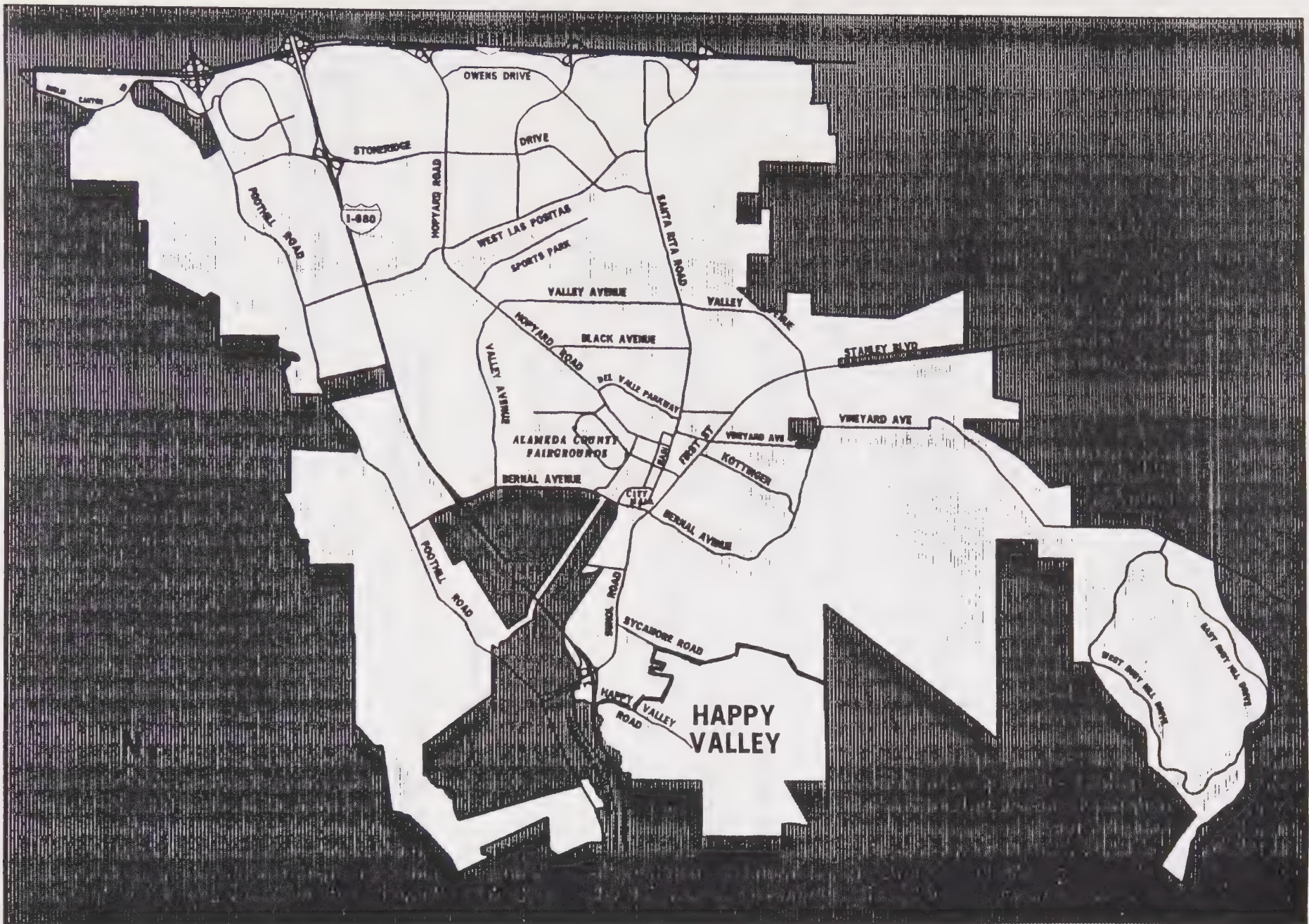
Telephone (510) 484-8158

WPR:ml(c:\hvgolf\cir.nop

CITY OF PLEASANTON
INITIAL STUDY
ENVIRONMENTAL CHECKLIST FORM

I. BACKGROUND

1. Name of Proposal: Happy Valley Municipal Golf Course/Specific Plan (GPA-97-01, SP-97-01, RZ-97-01), General Plan Amendment, Specific Plan, Pre-Zoning, and Annexation of the 850-Acre Happy Valley Area.
2. Proponent: City of Pleasanton
Contact Person: Wayne Rasmussen
Principal Planner
3. Address: 200 Old Bernal Avenue
P.O. Box 520
Pleasanton, CA 94566-0802
Phone: (510) 484-8158
4. Date Checklist Submitted: March 5, 1997
5. Person Preparing Checklist: Wayne Rasmussen
Principal Planner
6. Project Location: Immediately south of the current Pleasanton city limits, and immediately east of Interstate 680. Please refer to the Location Map on page 2.
7. Project Description: Please refer to the "Refined Concept Plan" on pages 3-7.



HAPPY VALLEY LOCATION MAP



REFINED CONCEPT PLAN

The Refined Concept Plan consists of an 18-hole municipal golf course and not more than 34 new half-acre home sites (in addition to the three existing homes) on the "Golf Course Properties" land. Flexibility should be retained, if possible, for permitting an additional nine holes of executive golf coupled with limited single-family home sites on the Spotorno Flat Area. Vehicular access to this south Happy Valley area should be provided by the Bypass Road designed to "country road" standards. Funding for the Road (beyond the North Sycamore Specific Plan area) should be paid on a pro-rata share basis by development on the Spotorno property and Golf Course Properties which derive benefit from the Road. The implications of developing this single-vehicular-access area served by the Bypass Road should be studied and the impacts properly mitigated through the Specific Plan and environmental review process. Temporary access to serve the Golf Course Properties from the Happy Valley Loop may be necessary until such time as the Bypass Road can be funded by the supporting residential development. Repairs and related resurfacing of the Happy Valley Loop road surface should occur throughout the Golf Course and Bypass Road construction phases in order to keep the Loop in a safe and well-maintained condition. Development of the Bypass Road and diversion of project construction traffic from the Happy Valley Loop shall be high priorities. Housing density in the Remaining Happy Valley area should be determined during the Specific Plan and environmental review process.

Financial Considerations

A variety of technical studies will be conducted prior to City Council action on the Specific Plan and Golf Course design. If the cumulative effect of these studies demonstrates a net cost savings to the Golf Course project, then such savings should be used to reduce the number of home sites required to help finance the project. Conversely, if the cumulative effect shows a net cost increase, then the difference should be funded by adding home sites to the Golf Course Properties. At the present time, it is estimated that 24 new home sites (along with the proposed City bond) will be adequate to fund the cost of acquiring and developing the 18-hole golf course, and six new homes sites will be required to pay the Golf Course Properties' pro-rata share of constructing the Bypass Road.

In the event that the Spotorno Flat Area ultimately remains available (and desired by the City) for golf course development, then the cost of land acquisition should be funded by the sale of additional home sites. The required number of home sites will be dependent upon the negotiated cost of acquiring the land.

Sanitary Sewer

The conceptual sewer plan outlined on pages 15-17 of the September 4 staff report will generally be implemented for the Happy Valley Area. The method of allocating the costs of constructing the sewer mains will be to have the various "reaches" paid for on a user basis, by allocating costs per-unit for existing and future homes and equivalent units for the golf course. Property owners would have the option of either connecting or not connecting existing homes to the City sanitary sewer system.

Projected sewer main costs for Subareas S1, S2, and S5 are shown on page 15 of the September 4 staff report. A detailed study will be necessary to develop a plan with associated costs for Subareas S3 and S4.

The neighborhood will ultimately need to decide through the Specific Plan process how it would prefer to cover the costs for sewer main construction and make this request to the City Council for a determination. This might be accomplished by: (1) an assessment district; (2) private installation on an as-needed basis of segments extending from the City's planned Alisal Street system; (3) "pay-as-you-connect" pro-rated basis when connecting to the Alisal Street main; (4) permitting additional housing in Happy Valley to reduce the costs of sewer main improvements; and/or (5) other methods.

A method of allocating connection costs will also have to be determined for the four-inch lateral from the sewer main in the street to the property line, installation of a "clean-out" and on-site sewer line, disposal of any septic tank, and payment of City and Dublin San Ramon Services District connection fees.

Water

The conceptual water plan outlined on pages 18-20 of the September 4 staff report will generally be implemented. The method of allocating the costs of constructing the water mains will be to have the various components paid for on a user basis, by allocating costs per-unit for existing and future houses and equivalent units for the golf course. Property owners would have the option of either connecting or not connecting existing homes to the City water system.

Project water main costs for Subareas W1 and W5 are provided on pages 18 and 19 of the September 4 staff report, but a detailed cost study for Subareas W2, W3, W4, and W6 will have to be conducted.

The neighborhood will need to decide through the Specific Plan process how it would prefer to cover the costs of water main construction and make this request to the City Council for a determination. This might be accomplished by: (1) an assessment district; (2) private installation on an as-needed basis of segments extending from the City's planned Alisal Street system; (3) "pay-as-you-connect" pro-rated basis when connecting to the Alisal Street main; (4) permitting additional housing units in Happy Valley to reduce the water main costs; and/or (5) other methods.

A method of allocating connection costs will also have to be determined for a water service line from the main to the meter, water meter, service line to the house, on-site plumbing with backflow preventer (to allow retention of well water, if desired), and City and Zone 7 connection fees.

Storm Water Drainage

Future development (particularly the golf course) on the larger parcels will be designed to reduce the volume of storm water runoff into Happy Valley Creek during peak-flow periods. Storm facilities such as detention basins, wet ponds, grass swales, etc., will be integrated into specific projects. This will also improve the quality of water before it flows into the Creek by acting as a filtering process.

An analysis of the existing storm drainage dynamics of Happy Valley Creek within and west of the Happy Valley area will also be undertaken to determine if any additional improvements are necessary. All improvements will need to be sensitive to the environmental conditions.

Trails

Over time, the series of trails illustrated on the General Plan Trails Map will be pursued by the City. Potential funding sources will include:

- Developer contributions for on-site and possibly some off-site trail improvements.
- East Bay Regional Park District contributions for "regional trails."
- State and Federal funding programs which promote trails and alternative transportation systems.
- The City of Pleasanton General Fund.

Annexation

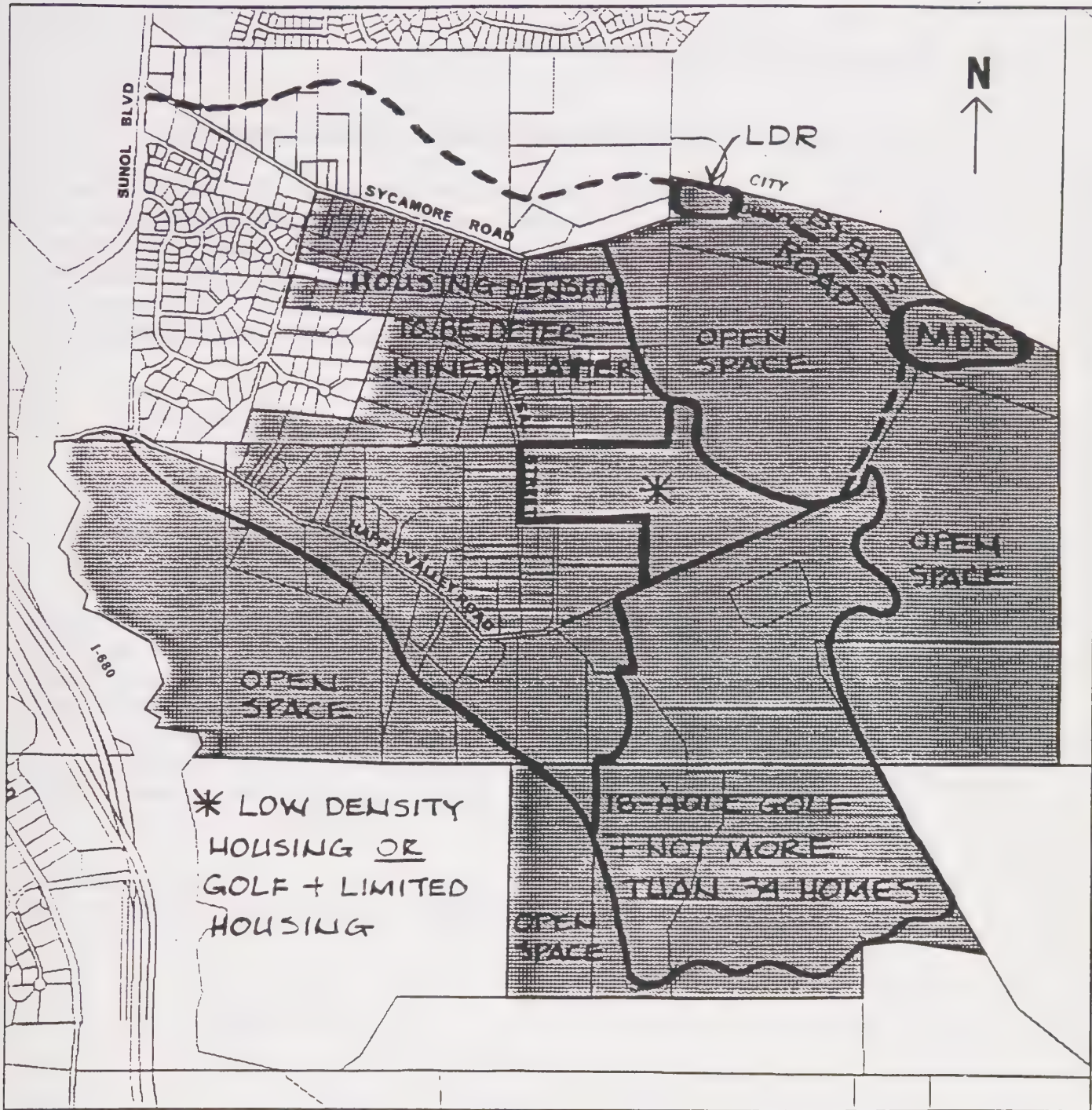
Parcels highlighted on the Refined Concept Plan map will be eligible for annexation to the City upon completion of a Specific Plan, pre-zoning, annexation application, and environmental review. However, the area of annexation is flexible and can be modified upon receiving further neighborhood input.

Specific Plan

A specific plan will be prepared by the City to more precisely and permanently establish future land uses and densities; coordinate the type, location, phasing, and financing of future infrastructure (i.e., streets, sewer, water, storm drainage, trails, etc.); and establish design guidelines. Design guidelines could help to accomplish the following:

- Preserve the rural/country character of Happy Valley in terms of the design of housing, accessory buildings, fencing, etc.
- Protect views of surrounding open space.
- Establish rural road standards such as minimal pavement width; no curbs, sidewalks, or street lights; etc.
- Minimize negative impacts on the quiet, safe, and peaceful living environment.
- Allow for the continued keeping of farm animals.
- Preserve the wildlife habitat in the Valley.
- Protect the existing natural quality of Happy Valley Creek.

A mechanism should be devised for sharing the cost of preparing the Specific Plan between the City and those deriving benefit from future development of their property.



City of Pleasanton

SCALE: 1" = 1250'

HAPPY VALLEY DRAFT REFINED CONCEPT PLAN



PLAN 919/091996/GS/SWW
FEB. 20, 1997

II. POSSIBLE ENVIRONMENTAL IMPACTS

A. Conformance of Proposal with Pleasanton General Plan Policies.

The proposed project is consistent with the policies contained in the Pleasanton General Plan. However, the General Plan Map and text would require modifications to permit: (1) a reconfiguration of land use designations (Low Density Residential, Parks and Recreation, and Public Health and Safety/Wildlands Overlay); (2) a minor adjustment to the Urban Growth Boundary Line location; (3) extension of a future collector street; and (4) modifications to the General Plan text regarding the description of the Happy Valley area.

 X
May be
Significant

Insignificant

Insignificant
if Mitigated

B. Impact on Existing Uses (On and Off Site)

The project would impact existing on-site uses (within the Plan Area) by permitting the subdivision of up to 234 additional residential parcels, as well as a golf course. This would result in additional traffic and noise, and a reduction of neighborhood privacy. Homeowners would have the option of receiving City sewer and water service, thus improving health and safety conditions. City water service would become available to more reliably serve personal and emergency fire protection needs. A storm water detention system and minor improvements to Happy Valley Creek would reduce existing flood hazards to acceptable levels.

Project impacts on existing off-site uses would include added traffic and noise on off-site streets, and reduced flood hazards along the off-site section of Happy Valley Creek.

 X
May be
Significant

Insignificant

Insignificant
if Mitigated

C. Geologic Impacts (Hazards, Change in Topography, Erosion, etc.)

Most of the developable portion of Happy Valley is situated on flat or moderately sloping land which does not present topographical or erosion concerns. However, the Upper Spotorno area, Bypass road, and areas along Happy Valley Road are partially located on steep slopes which may require major grading to accommodate development.

Limited landslide areas exist generally south of Happy Valley Road.

The eastern portion of the Plan Area is situated within an Alquist-Priolo Special Studies (earthquake) Zone, requiring specific geotechnical investigations prior to development.

<u>X</u>	<u> </u>	<u> </u>
May be	Insignificant	Insignificant
Significant		if Mitigated

D. Air Quality Impacts (Emissions, Odors, Change in Microclimate)

The project would result in minor, incremental increases in emissions due primarily to building heating/cooling and vehicular usage. However, based upon the General Plan analysis, this will not result in significant air quality impacts. Residential development would be subject to the City's growth management policies, which are consistent with the area-wide air quality management plan. Construction activity on the site would be subject to City standard dust control measures.

<u> </u>	<u>X</u>	<u> </u>
May be	Insignificant	Insignificant
Significant		if Mitigated

E. Water Related Impacts (Runoff, Flood Hazard, Quality and Quantity of Surface and Ground Waters)

Storm water runoff would increase as a result of more intensive development in the Plan Area. Residential development would introduce urban pollutants to surface runoff typical of that found in other similar residential areas, but hazardous substances are not expected. The Golf Course could introduce potentially hazardous fertilizers and other chemicals and will therefore require additional evaluation and possible mitigation. Drainage system improvements will be subject to current City standards. The flood hazard maps of the Federal Emergency Management Agency (FEMA) indicate that the project site is not located within a flood-prone area; however, portions of the Happy Valley Creek are known to experience occasional localized flooding.

 X
May be
Significant

Insignificant

Insignificant
if Mitigated

F. Plant and Animal Impacts (Effect on Existing Ecosystem, Rare or Endangered Species, etc.)

Most of the Plan Area consists of rural residential lots and grazing lands, which have been significantly disturbed over time. Happy Valley Creek contains significant riparian vegetation and wildlife. Limited portions of the hilly Open Space areas beyond the Urban Growth Boundary are included as a part of the City's Wildlands Overlay. Many heritage trees exist throughout the Plan Area. A field survey will need to be conducted by a qualified biologist to determine if any rare, endangered or threatened plant species exist within the Plan Area.

 X
May be
Significant

Insignificant

Insignificant
if Mitigated

G. Transportation/Circulation Impacts (Additional Traffic, Congestion, Parking, Hazards, etc.)

Additional traffic would be generated by the Golf Course and new homes. All traffic to, from, and within the Plan Area would use either the proposed Bypass Road or the Happy Valley Loop (Sycamore Road, Alisal Street, Happy Valley Road).

 X
May be
Significant

Insignificant

Insignificant
if Mitigated

H. Noise Impacts (Increases, Exposure to High Levels)

Increased noise on local streets would be created by added traffic generated by the Golf Course and new homes.

X
May be
Significant

Insignificant

Insignificant
if Mitigated

I. Impacts on Public Services (Fire, Police, Schools, Parks, Maintenance, etc.)

Incremental increases in the demand for public services would occur as a result of the proposed development. Services have already been extended to this area in conjunction with previous development of adjacent properties. Remaining police, fire, school, park, and related service capacities exist to adequately serve the project.

May be
Significant

X

Insignificant

Insignificant
if Mitigated

J. Impact on Utilities (Water, Sewer, Storm Water Drainage, Solid Waste, etc.)

Development will require an extension of sewer and water mains and other utilities into the Plan Area, subject to City design standards. A storm water drainage system of detention basins and minor improvements to Happy Valley Creek will be necessary to reduce current flood hazards to acceptable levels.

May be
Significant

X

Insignificant

Insignificant
if Mitigated

K. Growth-Inducing Impacts

The mostly flat developable portion of Happy Valley is located inside of the City's Urban Growth Boundary. Land located to the south and east of the Boundary but still within the Plan Area is planned to be protected as permanent Open Space.

May be
Significant

X

Insignificant

Insignificant
if Mitigated

L. Energy Impacts

Future development would be subject to local and State energy conservation standards, and present no significant increase in the demand for energy.

<u> </u>	<u> X </u>	<u> </u>
May be	Insignificant	Insignificant
Significant		if Mitigated

M. Aesthetic Impacts (Obstruction of Views, Design, etc.)

Areas where development is proposed are not readily visible from outlying portions of the City. The design of future development will be subject to standards contained in the Specific Plan.

<u> </u>	<u> X </u>	<u> </u>
May be	Insignificant	Insignificant
Significant		if Mitigated

N. Impacts on Archaeological or Historical Sites

No known archaeological or historical sites are present on the subject site. City policy requires appropriate mitigation should such a site be found.

<u> </u>	<u> X </u>	<u> </u>
May be	Insignificant	Insignificant
Significant		if Mitigated

O. Is there any serious public controversy concerning the environmental effects of the proposed project? If so, list below.

YES NO

 X —

Neighborhood concern regarding increased vehicular traffic, potential deterioration of semi-rural character, well water quality, and flooding have all been raised by residents of the area.

III. MANDATORY FINDINGS OF SIGNIFICANCE

YES

NO

- A. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? — X
- B. Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals? (A short-term impact on the environment is one which occurs in relatively brief, definitive period of time while long-term impacts will ensure well into the future.) — X
- C. Does the project have impacts which are individually limited, but cumulatively considerable? (A project may impact on two or more separate resources, where the impact on each resource is relatively small, but where the effect of the total of those impacts on the environment is significant.) — X
- D. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? — X

IV. STAFF RECOMMENDATION

 I find the proposed project would not have a significant effect on the environment and, thus, recommend that a Negative Declaration be prepared.

 I find that the mitigation measures recommended for the development for those aspects of the project which could have a significant effect would reduce the effects to insignificant levels and, thus, since such measures are included as conditions to project approval, I recommend a Negative Declaration be prepared.

 X I find the proposed project may have a significant effect on the environment, and, thus, recommend that an Environmental Impact Report be prepared.

Date

3/5/97

Signature

Wayne Rasmussen

Wayne Rasmussen
Principal Planner

APPENDIX B

FUNDAMENTAL CONCEPTS OF ENVIRONMENTAL ACOUSTICS

Noise is defined as unwanted sound. Airborne sound is a rapid fluctuation of air pressure above and below atmospheric pressure. Sound levels are usually measured and expressed in decibels (dB) with 0 dB corresponding roughly to the threshold of hearing. Decibels and other technical terms are defined in Table B-1.

Most of the sounds which we hear in the environment do not consist of a single frequency, but rather a broad band of frequencies, with each frequency differing in sound level. The intensities of each frequency add together to generate a sound. The method commonly used to quantify environmental sounds consists of evaluating all of the frequencies of a sound in accordance with a weighting that reflects the facts that human hearing is less sensitive at low frequencies and extreme high frequencies than in the frequency mid-range. This is called "A" weighting, and the decibel level so measured is called the A-weighted sound level (dBA). In practice, the level of a sound source is conveniently measured using a sound level meter that includes an electrical filter corresponding to the A-weighting curve. Typical A-weighted noise levels measured in the environment and in industry are shown in Table B-2 for different types of noise.

Although the A-weighted noise level may adequately indicate the level of environmental noise at any instant in time, community noise levels vary continuously. Most environmental noise includes a conglomeration of noise from distant sources which create a relatively steady background noise in which no particular source is identifiable. To describe the time-varying character of environmental noise, the statistical noise descriptors, L01, L10, L50, and L90, are commonly used. They are the A-weighted noise levels equaled or exceeded during 1%, 10%, 50%, and 90% of a stated time period. A single number descriptor called the Leq is also widely used. The Leq is the average A-weighted noise level during a stated period of time.

In determining the daily level of environmental noise, it is important to account for the difference in response of people to daytime and nighttime noises. During the nighttime, exterior background noises are generally lower than the daytime levels. However, most household noise also decreases at night and exterior noise becomes very noticeable. Further, most people sleep at night and are very sensitive to noise intrusion. To account for human sensitivity to nighttime noise levels, a descriptor, Ldn (day/night average sound level), was developed. The Ldn divides the 24-hour day into the daytime of 7:00 AM to 10:00 PM and the nighttime of 10:00 PM to 7:00 AM. The nighttime noise level is weighted 10 dB higher than the daytime noise level. The Community Noise Equivalent Level (CNEL) is another 24-hour average which includes both an evening and nighttime weighting.

The effects of noise on people can be listed in three general categories:

- subjective effects of annoyance, nuisance, dissatisfaction
- interference with activities such as speech, sleep, learning
- physiological effects such as startling, hearing loss

The levels associated with environmental noise, in almost every case, produce effects only in the first two categories. Workers in industrial plants can experience noise in the last category. Unfortunately, there is as yet no completely satisfactory way to measure the subjective effects of noise, or of the corresponding reactions of annoyance and dissatisfaction. This is primarily because of the wide variation in individual thresholds of annoyance, and habituation to noise over differing individual past experiences with noise.

Thus, an important way of determining a person's subjective reaction to a new noise is the comparison of the existing environment to which one has adapted: the so-called "ambient". In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by the hearers.

With regard to increases in A-weighted noise level, knowledge of the following relationships will be helpful in understanding this report.

- Except in carefully controlled laboratory experiments, a change of 1 dB cannot be perceived.
- Outside of the laboratory, a 3 dB change is considered a just-perceivable difference.
- A change in level of at least 5 dB is required before any noticeable change in community response would be expected.
- A 10 dB change is subjectively heard as approximately a doubling in loudness, and would almost certainly cause an adverse change in community response.

Table B-1
Definitions of Acoustical Terms

Term	Definitions
Decibel, dB	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micropascals (20 micronewtons per square meter).
Frequency, Hz	The number of complete pressure fluctuations per second above and below atmospheric pressure.
A-Weighted Sound Level, dBA	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise. All sound levels in this report are A-weighted.
L_{01} , L_{10} , L_{50} , L_{90}	The A-weighted noise levels that are exceeded 1%, 10%, 50%, and 90% of the time during the measurement period.
Equivalent Noise Level, L_{eq}	The average A-weighted noise level during the measurement period.
Community Noise Equivalent Level, CNEL	The average A-weighted noise level during a 24-hour day, obtained after addition of 5 decibels in the evening from 7:00 pm to 10:00 pm and after addition of 10 decibels to sound levels in the night between 10:00 pm and 7:00 am.
Day/Night Noise Level, L_{dn}	The average A-weighted noise level during a 24-hour day, obtained after addition of 10 decibels to levels measured in the night between 10:00 pm and 7:00 am.
L_{max} , L_{min}	The maximum and minimum A-weighted noise level during the measurement period.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Intrusive	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.

Table B-2
Typical Sound Levels Measured in the Environment and Industry

At a Given Distance From Noise Source	A-Weighted Sound Level in Decibels	Noise Environments	Subjective Impression
	140		
Civil Defense Siren (100')	130		
Jet Takeoff (200')	120		Pain Threshold
	110	Rock Music Concert	
Pile Driver (50')	100		Very Loud
Ambulance Siren (100')			
	90	Boiler Room	
Freight Cars (50')		Printing Press Plant	
Pneumatic Drill (50')	80	In Kitchen With Garbage Disposal Running	
Freeway (100')			
	70		Moderately Loud
Vacuum Cleaner (10')	60	Data Processing Center	
		Department Store	
Light Traffic (100')	50	Private Business Office	
Large Transformer (200')			
	40		Quiet
Soft Whisper (5')	30	Quiet Bedroom	
	20	Recording Studio	
	10		Threshold of Hearing
	0		

APPENDIX C

GOLF COURSE GRADING

The design of the proposed Happy Valley Golf Course calls for grading over much of the proposed Golf Course. The grading plan is estimated to balance approximately 782,000 cubic yards of cut material with approximately 802,000 cubic yards of fill, with the excess fill to be supplied from the area that is graded for the Bypass Road.

The tentative mass grading plan for the golf course is illustrated in Figure 31, and the biological resources that would be altered as a result of proposed grading are summarized in Figure 32.

Potential effects of the golf course grading plan are discussed in this EIR in Chapter 3, Part G (Drainage) and Part J (Biology).

The Specific Plan includes a number of requirements that are intended to mitigate these potential effects. They are identified in the discussion titled “Characteristics of the Project” in each of the sections named above, and are repeated here for convenient reference:

- **Golf Course Design and Management Plan.** A Golf Course Design and Management Plan shall be developed, that when properly implemented, would reduce or eliminate impacts to surface water quality from Golf Course operation and maintenance. Selected requirements of this Plan that apply to Golf Course grading are:
 - ***Minimize Golf Course runoff into nearby creeks.*** The plan would require (1) a minimum ten-foot natural vegetated buffer between the edge of irrigated turf grass and the top of bank of sensitive drainages and (2) drainage of all maintained turf areas away from nearby creeks and toward facilities planned to accommodate and manage runoff. These runoff management facilities include the new lake(s) planned for the Golf Course and grassed swales, area drains, and/or sumps for percolation.

Flow of Golf Course drainage away from creeks and drainage channels must be shown on grading and drainage plans.

Areas of maintained turf grass that drain towards creeks and drainage channels shall be minimized, and any such areas shall be indicated in the grading and drainage plans. Those areas shall be planted in either low maintenance turf grasses or naturalized or native grasses; alternatively, the areas shall be separated from the creeks or drainage channels by vegetated natural buffer areas.

Areas of high maintenance such as tees, fairways, and greens will be required to drain away from sensitive drainages.

Areas between golf holes shall generally be left in naturalized grasses to catch and obstruct runoff. Where this is not possible, in particular where there are long continuous slopes, areas between golf holes shall be graded to minimize high velocity flows.

Mass Grading Plan

Earthwork Cut: Approximately 782,000 cubic yards
Fill: Approximately 802,000 cubic yards

Grading in this area ties to preliminary bypass grading plan by David Evans & Associates



----- Area Boundary

===== Golf/Development Boundary

..... Existing Contour

———— New Contour



Trees



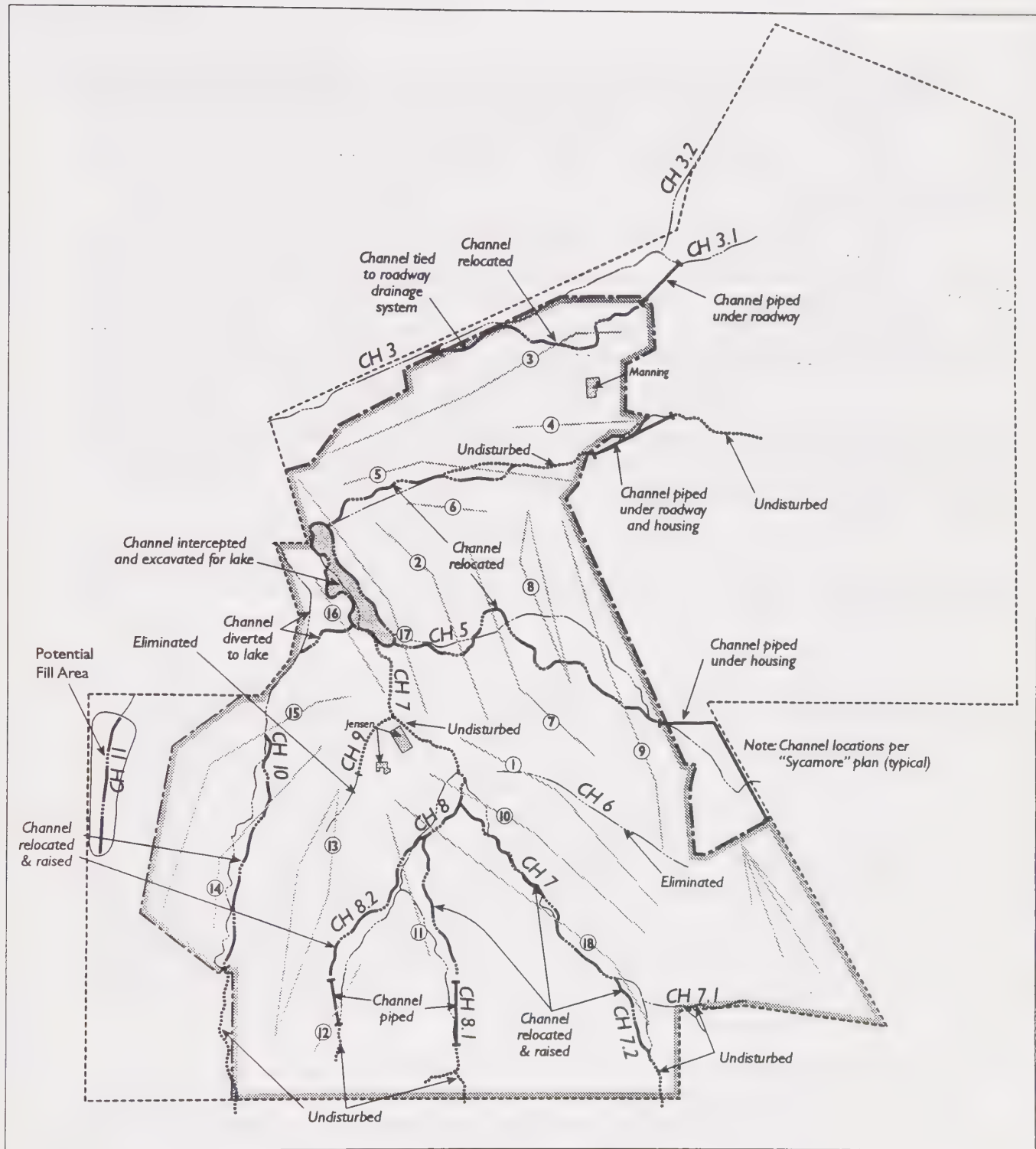
Golf Course Holes and Lines of Play



0 250 500 750 1000
FEET

Source: J. Michael Poellot Golf Design Group

Figure 31
Golf Course Grading



- Analysis Area Boundary
- ===== Golf/Development Boundary
- Relocated/Raised Channel
- Undisturbed Channel
- Channel Piped
- Trees
- ⑬ Golf Course Holes and Lines of Play



Figure 32

Site Features Affected by Golf Course Grading

Source: J. Michael Poellot Golf Design Group

- ***Manage discharge from subdrains.*** The Golf Course will be designed so that drain pipe discharge points from subdrains of greens or tees drain into vegetated swales or irrigation storage lakes. The subdrain discharge points may not be within 100 feet of a drainage channel. Discharge pipes must be directed to dense turf grass areas that can act as a biotic filter and allow percolation. The location of all drainages shall be indicated on the grading and drainage plans.

In most cases, it should be possible to provide a minimum of 100 lineal feet of grassy swale treatment (a sinuous swale, if necessary to increase length) prior to discharge to creeks. Grading and drainage systems shall be designed so that discharge occurs on the far side of the green or tee from the creek and, therefore, must travel in a grassy swale or thatch layer back around the tee or green to reach the creek. If subdrain discharge points *must* be within 100 feet of sensitive drainages to accommodate overall golf course design, alternative Best Management Practices (BMPs) shall be implemented to provide an equivalent level of runoff treatment. BMPs that may offer an equivalent level of treatment relative to 100 feet of overland or swale flow through turfgrass include infiltration (vaults or trenches) and media filtration (sand or sand/peat mixtures) features.

- ***Minimize the use of high maintenance turf grass.*** The Golf Course Design and Management Plan shall reduce the amount of high maintenance turf grasses where possible. Turf grasses that require less fertilization, such as fescues and ryegrass, shall be used for larger areas of turf grass. Out-of-play areas shall use native plants, where possible.

An efficient irrigation system shall be used, including a means of matching watering requirements with the evapotranspiration rate of the plants. Runoff shall be recycled back into the irrigation system through use of irrigation storage lakes as collectors, wherever possible. These requirements shall be indicated on the irrigation plans.

- ***Minimize erosion by stabilizing creek channels.*** The plan requires that newly-constructed (relocated) creek channels be designed and constructed to be stable. In addition, unstable portions of existing channel shall be stabilized to prevent further channel incision. The design should avoid abrupt changes in channel gradient and creek channel restrictions to flow (e.g., abutments for in-channel golf cart bridges). The designers shall consider use of coarse rock fragments (such as cobbles and boulders) and vegetation within drainage swales and creeks to limit flow velocities and erosion of the channel bed, stabilize the channel banks, improve the aesthetic appearance, and provide for some runoff filtration/treatment. Rock and vegetation in creeks would also discourage golf play within the channel, minimizing potential water quality impacts caused by users of the course.

Transitions from graded areas to existing unmodified creek channels shall be carefully designed to avoid creation of nickpoints¹ and abrupt changes in channel conditions that could lead to instability. Steepened channel reaches shall, where necessary, include channel grade controls. Energy dissipation structures shall be included in the design of the outlets of culverted sections of the creek to avoid erosion of creek channels. Golf cart creek crossings shall be designed to eliminate potential erosion impacts associated with golf carts in creeks. Either bridges or paved surfaces shall be provided at each crossing. Obstructions (e.g., appropriate

¹ The point of abrupt steepening of a stream profile.

vegetation and rocks) shall be placed along the creek at each crossing to discourage “off-path” travel through the creek channels.

- **Preparation of a California Tiger Salamander Mitigation and Monitoring Plan, and submittal of that Plan to DFG for review and approval.** Approval of the plan must be obtained from DFG prior to the issuance of any grading permits that affect tiger salamander habitat.
- **Preparation of a mitigation plan for California red-legged frog in consultation with the U.S. Fish & Wildlife Service (USF&WS) in support of a Section 7 Consultation.** The mitigation plan must be submitted to the U.S. Army Corps of Engineers (Corps) as part of the Section 404 permit process. A Biological Opinion must be obtained from USF&WS prior to the issuance of any grading permits that affect Red-legged frog habitat.
- **Completion of a preconstruction survey of the Spotorno residential development areas (Spotorno Flat and Upper Valley), Golf Course, and Golf Course Housing areas prior to the start of construction activities, to verify the presence or absence of active raptor nests.** If any active nests are found, construction must be scheduled so that it will not result in removal or abandonment of an active raptor nest.
- **If construction will affect Pond 3 (see Figure 24, p. 117, and Figure 32), completion of a preconstruction survey of the pond to verify the presence or absence of active Tricolored blackbird nests.**
- **Consultation with DFG in any areas subject to their jurisdiction prior to any encroachment into a designated corridor, and/or consultation with the Corps prior to any activity that would occur within the jurisdictional limits of wetlands or within the bed and bank of a waters of the U.S.**
- **Appropriate permits and/or agreements from regulatory agencies (DFG, USF&WS, and/or Corps) prior to realignment of Happy Valley Creek.**
- **Preparation and approval of a Riparian Restoration Plan prior to approval of a grading plan for the Project Area.** The riparian restoration plan must discuss anticipated impacts and proposed mitigation measures associated with the proposed realignment of Happy Valley Creek and any other affected riparian corridors in the project area subject to the jurisdiction of DFG and/or the Corps. The plan will be used to support applications for permits from DFG and the Corps.
- **Preparation and approval of a Master Landscape Plan and a Tree Preservation Plan prior to the approval of a grading plan for the project area.** Requirements for these plans are summarized in the “Impacts” section, below, in the discussion of heritage trees.

APPENDIX D

CULTURAL RESOURCES

A. BACKGROUND

1. Prehistoric Background

The chronological sequence for central California and the Lower Sacramento Valley begins with the Windmill Pattern (Fredrickson 1973). Sites from this period date from about 4,500 (or earlier) to 3,500 years ago. Although earlier sites no doubt exist, sites from the "Paleo-Indian Period", dating from about 12,000 to 8,000 years ago, and sites from an unnamed phase dating from about 8,000 to 4,500 years ago, are thought to be buried under Holocene alluvial deposits and are not well documented in this part of California (Ragir 1972). Various scholars have suggested Windmill sites are associated with an influx of peoples from outside of California who brought with them an adaptation to river-wetland environments (Moratto 1984:207).

Windmill sites are often situated in riverine, marshland and valley floor settings on small knolls above prehistoric seasonal floodplains. Most Windmill sites have possessed burials in what may be cemeteries. Typically, the remains are extended, oriented to the west, and contain copious amounts of mortuary artifacts. These artifacts often include large projectile points (spear or dart points) and a variety of fishing paraphernalia such as net weights, bone hooks, and spear points, as well as the vertebrate faunal remains of large and small mammals. Seed-grinding implements at the sites show that gathering and processing of seed resources was also common. Other artifacts such as charmstones, ochre, quartz crystals, Olivella and Haliotis shell beads in association with burial patterning and grave-good distribution suggest trade and a degree of ceremonialism may have been practiced.

The subsequent Berkeley Pattern (previously part of the "Middle Horizon") covers a period from about 3,500 to 1,500 years ago in the San Francisco Bay region. This pattern overlaps somewhat with Windmill attributes at the beginning and with Late Prehistoric artifacts at the end. Berkeley Pattern sites are much more common and well documented, and therefore better understood, than Windmill sites. The sites are distributed in more diverse environmental settings, although a riverine focus is common.

Deeply stratified midden deposits (resulting from generations of occupation) are common to Berkeley Pattern sites, as are an abundance of milling and grinding stones for processing vegetal resources. Projectile points are progressively smaller and lighter over time, culminating in the introduction of the bow-and-arrow during the late prehistoric period. As mentioned above, although there are shared traits with Windmill manifestations, artifacts unique to Berkeley Pattern sites include slate pendants, steatite beads, stone tubes and ear ornaments, and burial techniques utilizing variable directional orientation, flexed body positioning, and a general reduction of mortuary goods (Fredrickson 1973; Moratto 1984).

The late prehistoric period (formerly the "Late Horizon") ranges from about 950 to 150 years ago. This period, characterized as the Augustine Pattern (Fredrickson 1973), is typified by intensive fishing, hunting and gathering (particularly acorns), a large population increase, increased trade and exchange networks, increases in ceremonial and social attributes, and the practice of cremation (in addition to flexed burial). Certain artifact types also typify the pattern: bone awls for use in basketry manufacture, small notched and serrated projectile points indicative of use of the bow-and-arrow, some pottery, clay effigies, bone whistles,

and stone pipes. The Augustine Pattern and the late prehistoric period can be characterized as the apex of Native American cultural development in this part of California.

There is debate as to the niche of the San Francisco Bay Area in regional cultural schemes. Historically, much of the debate centers around whether Bay Area prehistoric cultural patterns are totally separate from, parallel to, or convergent with the cultural evolutions of the Lower Sacramento region. Bickel (1981:6-11) presents a detailed historical analysis of the changes in thinking about the Bay Area's place in regional culture history over the years; further analysis of the various cultural interrelationships can be found in Hughes (1994), Fredrickson (1993) and Elsasser (1986).

2. Ethnographic Background

There is a considerable body of ethnographic literature on the Native American inhabitants of the project region. This section provides a brief summary of the ethnography of the area and is intended to provide a general background only. For a more extensive review of Ohlone ethnography, see Bocek (1986), Cambra (et al. 1996); Kroeber (1925), Levy (1978), Milliken (1983), and Shoup and Milliken (1994).

The project area lies within the region occupied at the time of historic contact by the Ohlone or Costanoan group of Native Americans (Kroeber 1925). Although the term Costanoan is derived from the Spanish word *Costaños*, or "coast people," its application as a means of identifying this population is based in linguistics. The Costanoans spoke a language now considered one of the major subdivisions of the Miwok-Costanoan, which belonged to the Utian family within the Penutian language stock (Shipley 1978: 82-84). Costanoan actually designates a family of eight languages. Of these, Chochenyo or East Bay Costanoan was the language spoken by the estimated 2,000 people who occupied the "... east shore of San Francisco Bay between Richmond and Mission San José, and probably also in the Livermore Valley" (Levy 1978:485).

The other seven languages of the Costanoan family were spoken by tribal groups occupying the area from the Pacific Coast to the Diablo Range, and from San Francisco to Point Sur. Modern descendants of the Costanoan prefer to be known as Ohlone. The name Ohlone is derived from the Oljón group which occupied the San Gregorio watershed in San Mateo County (Bocek 1986: 8). The two terms (Costanoan and Ohlone) are used interchangeably in much of the ethnographic literature.

On the basis of linguistic evidence, it has been suggested that the ancestors of the Ohlone arrived in the San Francisco Bay area about 500 A.D., having moved south and west from the Sacramento-San Joaquin Delta region. The ancestral Ohlone displaced speakers of a Hokan language and were probably the producers of the artifact assemblages that constitute the Augustine Pattern described above (Levy 1978:486).

Although linguistically linked as a "family", the eight Costanoan languages actually comprised a continuum in which neighboring groups could probably understand each other. However, beyond neighborhood boundaries, each group's language was unrecognizable to the other. Each of the eight language groups was subdivided into smaller village complexes or tribal groups. The groups were independent political entities, each occupying specific territories defined by physiographic features. Access to the natural resources of the territories was controlled by each group. Although each group had one or more permanent villages, their territory contained numerous smaller camp sites used as needed during a seasonal round of resource exploitation.

Leadership was provided by a chief, who inherited the position patrilineally and who could be either a man or woman. The chief and a council of elders served mainly as community advisers. Specific responsibility for feeding visitors, providing for the impoverished, and directing ceremonies, hunting, fishing, and

gathering activities fell to the chief. Only in times of warfare was the chief's role as absolute leader recognized by group members (Levy 1978:487).

Extended families lived in domed structures thatched with tule, grass, wild alfalfa, or ferns (Levy 1978). Semi-subterranean sweat houses were built into pits excavated in stream banks and covered with a structure against the bank. The tule raft, propelled by double-bladed paddles similar to those that were used in the Santa Barbara Island region, were used to navigate across San Francisco Bay (Kroeber 1925).

Mussels were an important staple in the Ohlone diet as were acorns of the coast live oak, valley oak, tanbark oak and California black oak. Seeds and berries, roots and grasses, as well as the meat of deer, elk, grizzly, rabbit, and squirrel formed the Ohlone diet. Careful management of the land through controlled burning served to insure a plentiful and reliable source of all these foods (Kroeber 1925; Levy 1978).

The Chochenyo usually cremated a corpse immediately upon death but, if there were no relatives to gather wood for the funeral pyre, interment occurred. Mortuary goods comprised most of the personal belongings of the deceased (Levy 1978:490).

The arrival of the Spanish in the San Francisco Bay Area in 1775 led to a rapid and major reduction in native California populations. Diseases, declining birth rates, and the effects of the mission system served to largely eradicate the aboriginal lifeways (which are currently experiencing a resurgence among Ohlone descendants). Brought into the missions, the surviving Ohlone, along with former neighboring groups of Esselen, Yokuts, and Miwok were transformed from hunters and gatherers into agricultural laborers (Levy 1978; Shoup and Milliken with Brown 1994). With abandonment of the mission system and the Mexican takeover in the 1840s, numerous ranchos were established. Generally, the few Indians who remained were then forced, by necessity, to work on the ranchos.

3. Historic Background

The historic background of the site is divided into two periods: (1) the Spanish and Mexican Periods (1769-1848) and (2) the American Period (1848-Present).

(1) The Spanish & Mexican Periods: 1769-1848. Numerous Spanish exploratory expeditions would have passed through the Pleasanton area during the Spanish era. These included expeditions led by Fages, Portola, Fages and Crespi, Anza, Rivera, and Moraga (Levy 1978:486). Initial historic exploration of the San Ramon, Amador and Livermore Valleys occurred between 1769 and 1810.

Following the era of exploration, four Spanish institutions were employed to settle Alta California: missions, presidios, pueblos, and ranchos. Of these, the missions were the most successful. The favorable descriptions of the study area by early explorers Portola and De Anza led to the establishment of Mission Santa Clara and Pueblo de San Jose de Guadalupe in 1777. Mission San Jose, established in 1797, would have had the greatest impact on the local Ohlone population within the study area (Hoover 1990:6). Historic records indicate that between 1802 and 1822, 4,573 baptisms and 1,376 marriages took place at Mission San Jose. During this same time span, 2,933 Ohlone died at the Mission and by 1822 there were only 1,620 surviving Ohlone (Baker 1914:449).

After Mexico seceded from Spain in 1822, grants of land to private citizens began. Following the secularization of the missions in 1833, the number of land grants increased substantially. The Livermore Valley was divided into three ranchos; on the eastern side of the Valley was Rancho de las Positas, owned

by Robert Livermore; Rancho Santa Rita owned by Juan Bernal; and Rancho Valle de San Jose, which was centered in Pleasanton and owned by Augustine Bernal (Banks 1978:6).

During the Mexican Period (1822 to 1846) the study area was located in the southwestern section of Rancho Valle de San Jose (Beck and Hasse 1974:30). Within this huge rancho (51,000+ acres) were several adobe structures. Three are in Pleasanton near the project area: the Juan Bernal adobe and two Kottinger family adobes (Anastasio 1986:3). John W. Kottinger, one of the earliest Pleasanton settlers, married the daughter of Juan Bernal in 1850 and became the first store keeper sometime after 1852. Part of Kottinger's old adobe barn still stands on Ray Street outside the project area (Hoover 1990:15).

(2) The American Period: 1848 – Present. In 1848, California became a United States territory as a result of the Treaty of Guadalupe Hidalgo which ended the war with Mexico. California was not formally admitted as a state until 1850. The Gold Rush of 1849 brought a massive influx of immigrants to California from all parts of the world. California's 1848 population of less than 14,000 (exclusive of Indians) increased to 224,000 in four years.

After California was admitted as a state, Contra Costa County, one of the original 27 counties created by the California legislature, included what is today Contra Costa and Alameda Counties. In 1853, Alameda County was created from the western and southern sections of Contra Costa County. The precursor to Pleasanton was a small settlement named Alisal, founded in 1857 when Duerr & Nusbaumer opened a store in John Kottinger's house. Kottinger, who had immigrated from Austria in 1851, married into the Bernal family and operated a livestock ranch on a portion of the Bernal rancho (Wood 1883:478). By the mid-nineteenth century the majority of Rancho lands were subdivided as a result of population growth in the Livermore-Alameda Valley. By the 1870s, Rancho Valle de San Jose had been reduced in size to 500 acres (Thompson and West 1878:119).

By 1864, the town of Alisal had a hotel and a school, in addition to the general store operated in Kottinger's house (Hinkel and McCann 1937:195). The town of Pleasanton was named in 1867 for General Alfred Pleasonton [sic]; the misspelling was apparently a clerical error when the post office was established on June 4, 1867 (Bard et al. 1992:26). The center of town moved south to the train station when the railroad arrived in 1869 and by 1876 Pleasanton had several hotels, "some good stores", a post office, an express office, and numerous grain warehouses (Halley 1876:502). By the late 1870s, Pleasanton's population had grown to between 500 and 600 (Thompson & West 1878:25).

The rural areas surrounding the town of Pleasanton were particularly well adapted for livestock, and during the American Period a major industry in the project area was horse breeding (Fredrickson et al. 1978:33). Sheep, cattle, and angora goats were raised in the area, and other industries included timber harvesting from the mountainous regions, coal mining on Cedar Mountain and sandstone quarrying in the Altamont area (Wood 1883:479).

Pleasanton was incorporated in 1894. It remained a small farming community until after World War II when the opening of Parks Air Force Base and the Lawrence Livermore Atomic Research laboratory launched a period of growth that transformed the small community into a suburban residential/office community (Anonymous 1954:4). New residential subdivisions were built in the Pleasanton area starting in the 1950s as highway improvements made commuting easier to Oakland and the East Bay. During the 1970s and 1980s, Pleasanton became one of the fastest growing areas in the Bay Area as numerous new subdivisions, two large business parks, and a regional shopping center were built in the area. Pleasanton, now a major suburban office/residential community at the southern end of the "680 Corridor", has a population of over 58,000.

The 1878 Historical Atlas of the Pleasanton region shows much of the project area was owned by "B. Spudorno" [sic] (Thompson and West 1878:52). No further reference to B. Spudorno [sic] was found in the literature. The Spotorno family retained their property; the current owner and resident is Mr. Al Spotorno.

B. KNOWN CULTURAL RESOURCES AND PREVIOUS CULTURAL RESOURCE SURVEYS

A record search was conducted on May 14, 1997, by the staff at the Northwest Information Center, Rohnert Park, California. All known archaeological sites and previous cultural resource surveys within a one mile radius of the Happy Valley project boundary were researched. The National Register of Historic Places, the California Inventory of Historic Resources, and California Historical Landmarks Register were examined to determine if any county, state, or federal historic landmarks or National Register of Historic Places properties were located in the project area. No cultural resource sites have been recorded within the boundaries of the project area.

1. Previous Surveys

No cultural resource surveys have previously been conducted within the project boundary. Ten cultural resource surveys have been conducted within a one-mile radius of the project area. From these ten surveys, two archaeological sites have been recorded: CA-ALA-24 and CA-ALA-41. The site designated CA-ALA-24 is located within the Specific Plan Area and is described as "an occupation site that has yielded mortars, pestles, and arrowheads" (Wilson, 1950). The location of the site is somewhat speculative, as the only recording of the property (in 1950) was cursory insofar as locational data were concerned; no map was appended to the original site record. It was simply noted as being located "...on the Anderson Ranch; on a knoll behind the ranch house". Site CA-ALA-41 is located about three-quarters of a mile northwest and outside of the project's northern boundary and is described as "a camp or temporary village site on a slight knoll overlooking the SW (sic) tip of Livermore Valley" (Horner, 1950).

In addition to the sources mentioned above, information was gathered from the 1906 U.S. Geological Survey topographic map of the area, an 1863 Rancho Valle de San Jose Plat map, and from the 1878 Historical Atlas Map of Alameda County. These resources provided limited historic information on the location of possible structures, foundation remains or other historic resources within the project area.

2. Field Survey Conducted for this Project

The archaeological field survey of the Happy Valley project area was conducted on May 13 - 15, 1997 by Lori Harrington and Carrie D. Wills of William Self Associates, and January 13, 1998 by William Self (Figure P1).

a. Methodology

The strategy for the field survey was to conduct an intensive survey of the entire project area. Steep slopes (over 45 degrees) were excluded as it was surmised that cultural resource deposits, either historic or prehistoric, were unlikely in these areas. They were, however, examined visually for the presence of historic debris or rock outcroppings that might have served as shelters or could contain petroglyphs or incipient mortars. The survey utilized a transect interval spacing of approximately 30 meters (100 feet) or

less, walked in a zig-zag pattern. Ground visibility varied from fair to very poor depending on the vegetation. For the most part, ground surface visibility was poor due to tall grasses.

b. Survey Results

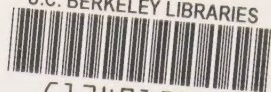
No prehistoric cultural sites, features or objects were observed during the survey.

One historic building (designated WSA-1), estimated to be over 100 years old, was discovered within the project area: a historic barn that appears to have original wooden siding and exhibits some square-headed [hand-wrought] nails, typically used before 1895. The roof appears to have been replaced with more recent roofing materials, and other modifications may have occurred to the structure. The setting has been altered through the introduction of more recent structures. The barn appears to retain some integrity of materials and workmanship and is in its original location.

In a portion of the survey area east of Alisal Street and north of the Faith Chapel Assembly stands a metal windmill with "The Aeromotor Co. Chicago" painted on a wind vane extending from the main shaft. Research indicates that this type of windmill (Model 702) has been in production since 1933 and is the "... most common of all the windmills seen in the field today" (Baker 1985:116). Due to the utilitarian nature of the windmill (it remains in use), the lack of definitive dating criteria, and the fact that it appears, based on its observed condition, to be of recent manufacture, it is not considered historically significant and was not recorded as an historic property. No foundation remnants or other historic debris were observed near the structure.

No additional historic sites or prehistoric sites, objects or features were observed within the survey area. Some portions of the area were not examined during the survey. The land owned by General Electric (bordering the southeast portion of the Specific Plan area) was not accessible. The Koopmann property (bordering the southern portion of the area) was not examined as it is proposed as open space only. A complete technical report on the results of the survey has been completed and is on file at the California Historical Resources Information System Northwest Information Center offices at Sonoma State University (William Self Associates, 1998).

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